

ASPECTS OF MIGRATION IN VICTORIAN LINCOLNSHIRE

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1985**



DECLARATION

I declare that this thesis has been composed by me and that it is all my own work.

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The thesis examines selected aspects of migration in the county of Lincolnshire in the second half of the nineteenth century. The work commences with a discussion of the existing literature on Victorian migration. This is seen as deficient on several counts. First, it neglects all but the larger urban destinations. Second, it stresses the uniformity of migratory behaviour at the expense of variation: migration is typically seen as having occurred over short distances, among the young and single. Third, a crudely material interpretation prevails in which migration is viewed as the straightforward 'push' and 'pull' of economic forces. Lastly, the actual experience of migration is neglected. The thesis attempts to redress these deficiencies in existing work.

After a description of research methods in Chapter 2, Chapter 3 outlines the aggregate population trends and migration patterns in Lincolnshire in the nineteenth century. Chapter 4 then presents a detailed discussion of the characteristics and nature of rural depopulation in the latter part of the century. The task here is two-fold. First, to explore migration from the perspective of the sending communities rather than, as usual, destinations. Second, to examine in detail the possible 'causes' of rural out-migration in this period. It is argued that a preoccupation with the structural level of explanation has led to an over-emphasis on the 'economic' factors behind the 'flight from the land'.

The next part of the thesis uses the 1881 manuscript census to explore migration into two contrasting centres of urban growth in Lincolnshire in this period. These are Grantham, a mature urban community with an expanding engineering industry, and Scunthorpe, a nascent urban area based on the iron industry. Chapter 5 describes the growth of the Scunthorpe district in the second half of the century. In Chapter 6 the tendency in some of the literature to explain migration patterns purely in terms of skill differentials is tested and found wanting as far as the Scunthorpe iron industry is concerned. Also important were the culture of working life and the operation of job information networks. Direct, long-distance mobility was not the preserve of the urban skilled. Chapter 7 examines migration into Grantham. The patterns found are compared and contrasted with those that prevailed in the Scunthorpe district. Differences emerge on several counts, not least in the operation of the skill-distance relationship explored in the previous chapter. Chapter 8 focuses on another potential source of variation between the two locations: the relative importance of family migration is assessed and marked differences are found. A new perspective is adopted in Chapter 9 where an attempt is made to explore the actual experience of being a migrant in each of the two study locations. Discussion is cast around existing views of the 'assimilation' of migrants to urban life. Fresh insights hopefully result from concentrating on smaller destinations than is the case in other studies and by exploring a county where 'rural' is largely synonymous with 'agricultural'. The profound difficulty of interpreting behavioural evidence on this point is brought out, as is the need to stress the migrant experience over the longer term. The thesis closes with an overview of the preceding chapters and a delineation of the more general themes to emerge. Last of all, some suggestions are made for future research in this field.

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ABBREVIATIONS AND REFERENCES

Abbreviations and symbols used

CEBs	Census enumerators' books
LAO	Lincolnshire Archives Office
LCS	Life cycle stage
N	Total number of cases (i.e 100%)
-	Zero/no cases (in tables)
>	Greater than (in tables)
<	Less than (in tables)
>=	Greater than or equal to (in tables)

References

Notes to the text contain only brief references to secondary works. Full references are given in the bibliography at the end of the thesis.

CHAPTER 1. INTRODUCTION

Migration was of huge significance in nineteenth century Britain. The massive economic and social changes that took place could not have occurred without an accompanying shift in the spatial distribution of the population. The growth of vast new industries was dependent on the existence of a mobile workforce, and the transition from a rural to a mainly urban society was largely the result of migration.¹ In individual terms, too, migration was of profound significance. We now know that well over half of the population who lived to an old age died in a different place to that in which they had been born. And a great many had moved more than once. Mobility was not an aberrant undertaking: it was the norm. For millions of individuals, then, to move home was customary behaviour. Yet we know relatively little about this widespread phenomenon. The existing literature abounds with generalisations based on aggregate data and a handful of more detailed case studies. Migration is typically seen as having occurred over short distances, among the young and single, a uniform experience reflecting the straightforward 'push' and 'pull' of economic forces.² This thesis is an attempt to move away from such a simplistic assessment. It examines various aspects of migration in the county of Lincolnshire in the second half of the nineteenth century. It explicitly seeks out the variety of migratory behaviour and experience, focusing on the different factors which underlay particular migrations. Patterns and processes of movement are examined not as an end in themselves but in order to cast light on the determinants and consequences of migration from the perspective of those involved.

Definitions

What is migration? In theory, the term can be applied to any kind of human population movement, from emigration overseas to a visit next door. For practical purposes migration is usually regarded as any permanent or semi-permanent change of residence.³ This is the definition used in this thesis. Put this way, migration can be conceptualised as a change in an individual's 'centre of gravity', rather than as movement to and from such a 'centre'.⁴

Migration is the result of a spatial inequality in objective opportunities combined with an individual person's perceptions of those opportunities. Two important implications rise from this. First, migration can be seen at more than one level. On the one hand there are those external, macro-level variables ('objective opportunities') which provoke movement. On the other hand are those personal, individual circumstances and perceptions which underly a particular decision to migrate.⁵ An actual move is the result of the interaction of these two levels.

Second, therefore, no two migrations are exactly identical. Nevertheless, certain individual circumstances and perceptions are common to particular sub-groups within the population. For this reason migration is selective by age, life cycle stage, sex, educational level, occupation, economic and social status and by cultural attributes such as colour, language and religion. Beyond these external characteristics, scholars have identified a migration prone sub-society based on attitudinal characteristics. 'Innovators' thus have a higher propensity to mobility than have 'traditionalists'; 'cosmopolitans' move more than 'locals'.⁶ The significance of migration lies in this selectivity. It entails a spatial transfer not just of people but also of the attributes they possess. A study of migration can therefore cast light on the wider structures and processes at work in both sending and receiving societies.

Migration in Victorian Britain

Migration in Victorian Britain has been the subject of considerable research. While some scholars have used a selection of illustrative material⁷, and others have used sources such as parish and civil registers⁸, the bulk of existing research is based upon the systematic record of the decennial census. At one level, published census and vital registration data are combined to calculate inter-censal net migration between different administrative units from 1841 onwards.⁹ Analysis is necessarily conducted at a high level of aggregation, using either counties or Registration Districts. The emphasis of these studies is upon changes in the pattern of net balances over time, on the relative contribution of net migration and natural increase to population gain or loss in particular districts, on the relative size of the rural and urban populations, and on the volume of emigration overseas. And recently one scholar has used the published census material to break down net migration into its component flows.¹⁰ But with the notable exception of this last example, these aggregate studies share a common characteristic: they are essentially descriptive.

Some analytical investigations of the aggregate data have, however, been undertaken. The earliest of these is also the most well-known, namely Ravenstein's attempt to deduce the general 'laws' governing migration from the published census data.¹¹ More recent work has tried to use the aggregate material to test particular hypotheses. Two studies have conducted regression analysis of county-level data to assess the relative importance of a selection of potential determinants of migration¹², and Friedlander has used Registration District figures to assess the importance of migration among other demographic responses to socio-economic developments.¹³ The main handicap in all such exercises is, of course, the crudity of the raw data. The published information is limited in content and the large units of analysis render interpretations wide open to the ecological fallacy.

It is partly for this reason that scholars have turned to the micro-level information available in the manuscript census. The value of this source for the study of nineteenth century Britain is now so well-known that further comment would be superfluous.¹⁴ By examining individuals, families and sub-groups within local populations, a more detailed analysis of mobility is possible. All sorts of subjects have been looked at. They include the relationship between migration and economic development, urban and suburban growth, residential patterns, transiency and persistence, family structure, employment patterns, and cultural change. The content and behaviour of particular migrant streams have been investigated. So, too, have the various migratory paths which individuals have taken.¹⁵

Many of the more substantial works explore a selection of these topics, and migration is often examined as part of a wider census-based community study. Common to all projects (though to widely varying degrees of sophistication) is the identification of the incidence, patterns and processes of movement between any two areas. Beyond this, however, it is possible to isolate certain aspects of migration in which scholars have been particularly interested. The family has been one such topic. The most notable example is Anderson's work on the impact of industrialisation and migration on family structure in mid-nineteenth century Lancashire.¹⁶ He found that rather than disrupting family ties, kin were the main source of assistance used by migrants to cope with their new life in the town. Similarly, both Collins and Lees stress the role of the 'family economy' in shaping the characteristics of Irish migration into certain towns.¹⁷ These two studies also illustrate another concern of much of the literature with particular groups of migrants. The Irish have been the most popular subject, probably on account of their high visibility, but Scottish and Welsh migrants to English towns have also been examined.¹⁸ Certain occupational groups have also been investigated. The most comprehensive

studies are those by Grundy on the Liverpool cowkeepers and by Jackson on the St. Helens' glassmakers.¹⁹ As far as the locale of research is concerned, even the major projects are necessarily confined to just one or two destinations. Towns have proved by far the most commonly-studied locations.

Most urban studies describe the patterns of in-migration that prevailed²⁰, but more recently considerable attention has been paid to the movement of population within the city as revealed through the linkage of successive censuses. This is largely inspired by studies of American urban areas which have found enormously high population turnover between censuses.²¹ In Britain, the most notable studies are Dennis's work on Huddersfield, Pooley's on Liverpool, and Pritchard's on Leicester.²² All have found a high degree of intra-urban movement, though mainly over short distances. Such moves can further be linked to other variables such as age, life cycle stage, occupation, and social and migration status. Attention has also concentrated on the behaviour of migrant groups once settled in the town. In particular, the residential differentiation of migrants has been explored for several urban locations. For example, Pooley has examined the degree of 'separateness' exhibited in the housing patterns of the Welsh, the Scots, the Irish and the English in Liverpool in the 1871 census.²³ Quantitative indicators of segregation are calculated and combined with more illustrative evidence. On the basis of such material scholars have pronounced on the success or failure of the migrant to 'assimilate' to an urban sub-culture.²⁴ From a similar perspective there has been an increasing tendency to try to relate the behaviour of migrants to their previous background and experience. Thus Collins linked the behaviour of the Irish in Dundee and Paisley to the economic and social structures of that part of Ireland from whence they originated; Grundy linked the activities and behaviour of the Liverpool cowkeepers to the circumstances of their Dales roots.²⁵

Despite all this attention, our knowledge is far from exhaustive. In part, this is due to the deficiencies of the sources. Compared, say, with their Swedish counterparts, scholars of British population mobility have to contend with considerably inferior demographic records.²⁶ Only the cross-sectional census snapshot is available. No continuous register of migration was kept. Nevertheless, there is still much that remains to be done within the confines of the available material.

In particular, several lacunae can be identified in the work done so far. First, there is a neglect of all but the larger urban destinations. Existing studies tend to be city-centric. Cardiff, Huddersfield, Liverpool, Nottingham, Preston, Sheffield, Wolverhampton and York: all have had their nineteenth century migrant populations scrutinised from various angles and with variable rigour.²⁷ Little work has been done on movement within rural areas. The plethora of village studies which have been undertaken by local history groups rarely go beyond simple counts of the migrant population. None have been integrated into a larger survey.²⁸ The rural studies by Bryant and Robin are unique.²⁹ Migration into smaller urban centres has also been neglected.³⁰ There has been an implicit assumption in much of the literature that depopulating villages and market towns do not contain people worthy of study as movers, whereas the great industrial towns are brim full of migrants behaving in a multitude of interesting ways. Nor has there been much comparative analysis of contrasting urban destinations.³¹

Second, there is a lack of any really useful information on the sources of variation in migration patterns. Little is known about migration differentials beyond an obvious demographic selectivity. It is well-established that migrants are not a random cross-section of either their sending or receiving societies.³² Those of particular age, sex and life cycle stage show a higher propensity to move than others. Beyond this, social, economic and cultural differentiation are

seen simply in terms of those attributes which can be directly identified from the census. Thus birthplace and occupational status are found to affect migration behaviour but cultural influences, individual motives and personal circumstances are neglected. Moreover, while variation within migration is at least partly established, differences between particular migration streams is hardly mentioned. Thus only the general selectivity of migration is stressed, even though that very selectivity is itself potentially variable.

Third, little is known about the causes and motives behind migration. It has proved much easier to describe the external form of movement than its underlying influences. This is inevitable given the nature of the census information. Meaning must be inferred from observed behaviour. In explaining why a particular migration took place, scholars have usually assumed a simple model of economic causation operating through a 'push/pull' mechanism. People were moved to and fro at the behest of the demands of the labour market. Such a perspective undoubtedly derives from the oft-observed ecological correlation between net migration shifts and the spatial distribution of wage levels and job opportunities.³³ But within this general behaviour there was huge scope for individual choice and circumstance to play a part. Recent theoretical discussions have stressed the need to view migration as an individual or family decision.³⁴ From this standpoint, a whole range of subjective, qualitative influences behind migration suggest themselves, working alongside the more material structural factors.

Fourth, there is much confusion in the literature about exactly what migration entailed. There seem to be two broad interpretations. The pessimistic approach tends to emphasise the traumatic experience of moving from countryside to town, while recently a more optimistic view has emerged which stresses the ease with which migrants were able to 'assimilate' to urban life. While some studies make this issue their central focus, in others it is either

implicit or avoided altogether.³⁵ Uncertainty exists about how best to measure integration, about the different experiences of individual migrants and of those who moved to different types of destination, and about the importance (if any) that should be attached to the previous experiences of those involved.

Outline of the research

For practical reasons, this thesis is restricted to just one region of nineteenth century Britain, and to specific locations within that region. The county of Lincolnshire was selected for study on two counts. First, its major urban and industrial development occurred later in the nineteenth century than was the case elsewhere. Second, its rural economy was predominantly agrarian: there was no rural industry.³⁶ The county thus presents a classic case of movement off the land into the towns in a relatively well-documented period.

The thesis examines selected aspects of migration in Lincolnshire in the second half of the nineteenth century. Particular topics were chosen for investigation because they seemed to possess the greatest potential for illuminating those areas of neglect outlined above. Individual topics are each discussed with reference to the existing literature. Only a broad outline of the contents of each chapter therefore need be given here.

After a description of research methods in Chapter 2, the work commences with an outline of the aggregate population trends and migration patterns in Lincolnshire in the nineteenth century (Chapter 3). Chapter 4 then presents a detailed discussion of the characteristics and nature of rural depopulation in the latter part of the century. The task here is two-fold. First, to explore migration from the perspective of the sending communities rather than, as

usual, destinations. Second, to examine in detail the possible 'causes' of rural out-migration in this period. It is argued that a preoccupation with the structural level of explanation has led to an over-emphasis on the 'economic' factors behind the 'flight from the land'. A close scrutiny of the evidence suggests the importance of more subjective and qualitative influences.

The next part of the thesis is a census-based study of migration into two of the county's growing urban locations. These were chosen using two criteria. First, by the need to move away from the aforementioned emphasis on large industrial cities in the existing literature. Second, it was considered beneficial to examine two contrasting places, each representing a different 'type' of Victorian urban location.

Grantham lies in the division of Kesteven in south Lincolnshire. It is an old market town and coaching stop with good communications to many parts of the country. In the latter part of the nineteenth century it experienced population growth as the concomitant to (albeit belated) industrial development. Scunthorpe is an urban area in the very north of Lincolnshire, in the division of Lindsey, though it could hardly be called a town until early in the present century. At the time of this study it consisted of five separate townships which - to quite varying degrees - experienced population growth as the result of the discovery of ironstone and the development of iron working. It can best be typified as a nascent industrial-urban area. Neither of these two types of destination have received much attention from scholars.

Chapter 5 describes the growth of the Scunthorpe district using a mixture of the census and other sources. In Chapter 6 the patterns of labour migration into the district are related to the nature of working life in the dominant iron industry and to the background of those involved. As in Chapter 4, the purpose is to establish the appropriateness of existing explanations of

movement. Many studies tend to interpret migration patterns in terms of skill differentials among the workers concerned, but the evidence presented here suggests a more complex web of factors to have been at work. In Chapter 7 attention turns to Grantham. Migration into the town is examined, again using data from the 1881 census books. The patterns found are compared and contrasted with those that prevailed in the Scunthorpe district. Differences emerge on several counts, not least in the operation of the skill-distance relationship explored in the previous chapter. Chapter 8 focuses on another potential source of variation between the two locations. The relative importance of family migration is assessed and marked differences are found. A new perspective is adopted in Chapter 9. This addresses the fourth of the lacunae discussed above. It attempts to explore the actual experience of being a migrant in each of the two study locations. Discussion is cast around existing views of the 'assimilation' of migrants to urban life. Fresh insights hopefully result from concentrating on smaller destinations than is the case in other studies and by exploring a county where 'rural' is largely synonymous with 'agricultural'. The thesis closes with an overview of the preceding chapters and a delineation of the more general themes to emerge. Last of all, some suggestions are made for future research in this field.

CHAPTER 2. RESEARCH METHODS

This project uses a wide variety of source materials. The bulk of the statistical analysis, however, is based upon the 1881 census enumerators' books for Grantham and Scunthorpe. This material is presented in Chapters 5 to 9. The present chapter describes the methods used to handle this source.

In general, it is possible to identify three types of data with which to examine migration: 'continuous', 'survey' and 'census'.¹ Only the last of these is available to the student of Victorian Britain. No continuous register of mobility was kept and the dead cannot answer a modern survey questionnaire.² Moreover, even the census contains less information than we would like. Unlike their modern counterparts, Victorian censuses never contained 'period' questions about the respondent's whereabouts so many months or years previously. All we have are birthplaces.

A census is but a snapshot. The information it contains lends itself most readily to cross-sectional analysis. The bulk of the statistical analysis in this project is of this nature. Such an approach has two main drawbacks. First, it limits the range of questions we can answer. The amount of information provided on each individual is small. Second, and relatedly, it tends to present migration as a 'once and for all' phenomenon. No details about a person's earlier movement are given. All we know is where they were born and where they now live.³ A 'longitudinal' analysis can fill in the gaps, but really requires continuous or survey data. However, a certain amount of additional information can be obtained from the census. First, the age and birthplaces of co-resident children have been used at certain points in the research to flesh out the migration history of those who are parents. Second, material in two successive censuses was linked together for one of the study locations in an

attempt to find out more about the past experience of selected groups of people.

II

Detailed guidelines for using the manuscript census are now well-established and need not be repeated here.⁴ Information on individuals from the 1881 census books of both study locations was transcribed, coded and entered into data files on the computer. Birthplace information was coded using several variables: county of birth, individual community of birth and the four-figure Ordnance Survey grid reference. The latter allowed the distance between place of residence and place of birth to be calculated using Pythagoras's theorem. Occupation, too, was coded in more than one variable, often on the basis of cross-reference to a contemporaneous directory.⁵ In addition to the data on individuals, household- and family-level variables were also coded in accordance with the database structure outlined below.

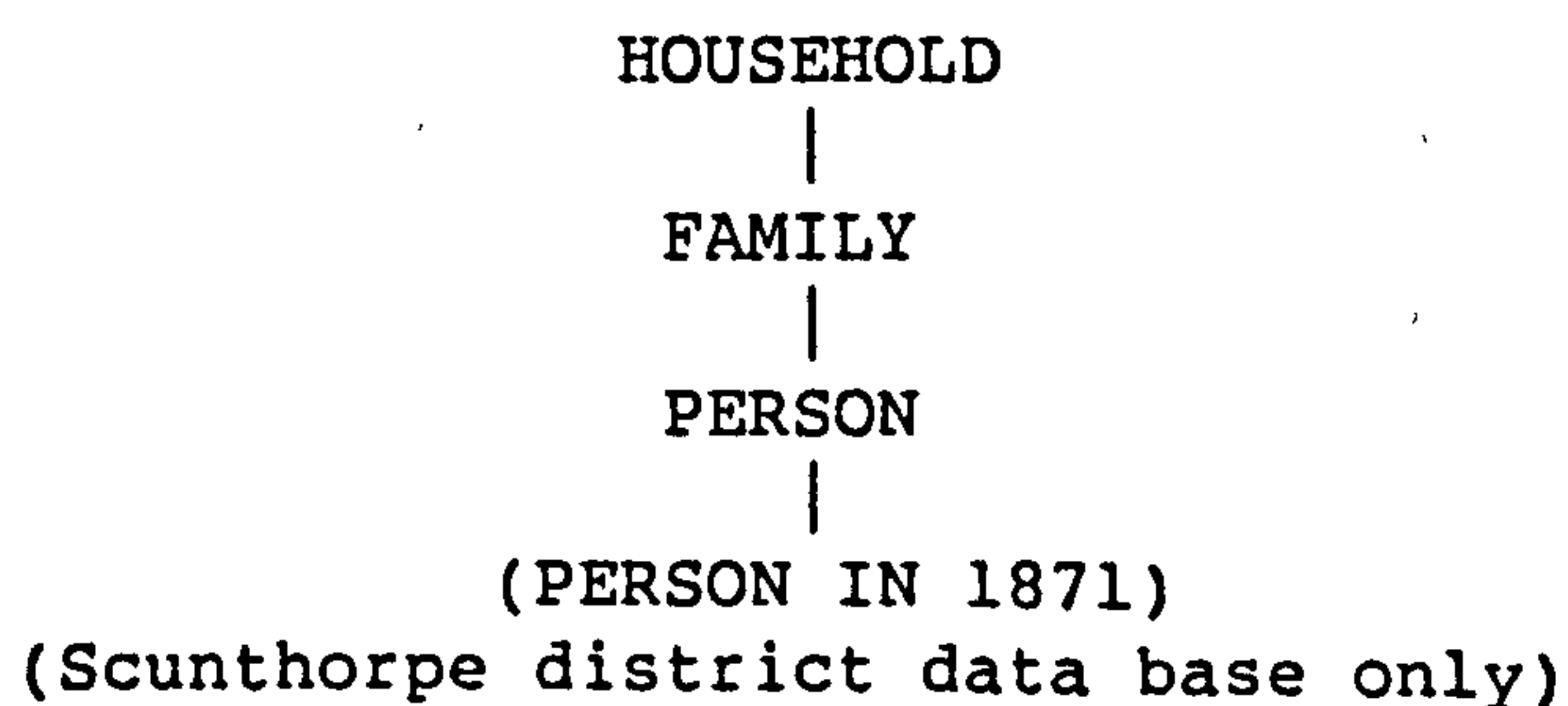
In the case of the four Scunthorpe district study townships, the whole population was used. This resulted in a data set of 5332 individuals.⁶ The population of Grantham in 1881 was too large to be handled in total, so a one-in-three systematic sample was taken of all households in the Municipal Borough.⁷ This gave a data set of 5552 individuals from a total population of 16863.⁸

Institutions were dealt with in one of two ways. Quasi-institutions, such as Grantham's many coaching inns, and small institutions, such as boarding schools, were treated as normal households for sampling purposes. They could subsequently be isolated in the data by means of a variable defining dwelling type. For institutions proper, a one-in-three sample was taken of all the inhabitants. In the case of Grantham Union Workhouse, the population was first reduced before sampling, because the Union covered a much larger area

than the Borough. Hence random number tables were used to reduce the number of inmates by the ratio of the Union population to that of the Borough. Another large institution in Grantham was the Royal South Lincoln Militia Barracks. However, this contained no troops, only NCOs and bandsmen with their families, enumerated as separate households in the normal way. Thus a one-in-three sample of the households was taken. These inhabitants were not treated as 'institutional' in subsequent analysis.

III

The coded data sets were maintained on the computer using the SIR database management system.⁹ This package allowed the data to be structured and stored in a 'top-down' or hierarchical form. Thus records at the highest level 'own' records at a lower level; these in turn 'own' those at the level below them. The structure of the two data bases is shown here:



Every individual belongs to a notional nuclear family (parents with their children); each family in turn belongs to a household. Thus a single lodger, for example, belongs to a 'family' of one member (him/herself), as well as to the household in which he/she resides.

Certain individuals in the Scunthorpe area also 'own' an additional record. This contains information on their characteristics in the 1871 census, where successfully traced (see below).

A complication arose over those people who belonged to two family units, such as married children with spouse present. The procedure used here was that designed by Anderson in the 1960s.¹⁰ This consists of creating an additional file of 'secondary' family units. Such a file is, of course, a duplicate of the individual-level information but provides additional family-level information.

Table 2.1 shows the size of the final data base at its various levels. Although each individual belongs to a notional family, a separate family-level record of information was only included for actual nuclear family units. (These were defined as married couples with or without children and widow-headed families; childless widows and widowers were not deemed to be 'actual nuclear families'). Thus the categories 'household' and 'individual' are actual counts of the incidence of each unit in the data base, while the category 'family' refers to actual families rather than the notional families used to structure the hierarchy.

SIR/DBMS is extremely versatile. It allows information to be aggregated from lower to higher levels in the hierarchy, or to be distributed down in the opposite direction, or a combination of both. For example, the number of lodgers in a household can be aggregated, and this information then distributed to each individual in that household. Furthermore, SIR/DBMS facilitates 'plex' or 'network' analysis, whereby each case can be linked to another beyond its own hierarchy. This allowed relationships between households in the study locations to be explored.¹¹ The 'flat' files resulting from a SIR 'retrieval' were written out to an SPSS system file for statistical analysis.¹²

IV

Before analysis could begin it was necessary to weed out errors from the data. Two methods were used. SIR/DBMS, in its 'schema definition' stage, permits the specification of valid ranges and illegal combinations of variable values.

TABLE 2.1 **STRUCTURE OF THE CENSUS DATABASE, GRANTHAM SAMPLE
AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881.**

	<u>Households</u>	<u>Families</u>	<u>Individuals</u>	<u>Individuals 1871</u>
<u>Grantham sample</u>	1093	982 (31)	5552 (98)	N/A
<u>Scunthorpe district</u>				
Individual settlements:				
Ashby	314	292	1463	55
Old Brumby	34	33	168	4
Old Frodingham	71	73	403	15
New Brumby	47	53	246	17
New Frodingham	179	184	1013	46
Scunthorpe	404	398	2039	179
Total Scunthorpe district	1049	1033 (24)	5332 (86)	316

Source: Census Enumerators' Books (hereafter C.E.Bs)

Note: The figures in parenthesis refer to the additional file of family units not counted in the main data file. Thus the figures in parenthesis in the 'individuals' column refer to the number of persons who are so duplicated. These are already included in the main unbracketed figures.

Second, erroneous values were isolated from subsequently created SPSS flat files of individuals. The data bases were then re-created from the corrected raw data.

Following this, the Grantham sample was tested for representativeness using information available for the total population. Only the age and sex distribution is given in the published census. First, a chi-square test was conducted. This gave a summary measure of the overall goodness of fit between the sample and the population age/sex structures.¹³ As far as the characteristics of age and sex are concerned, the sample distribution was found not to be statistically significantly different from the population distribution as a whole at the 0.05 level.¹⁴ Although the sample as a whole may be representative it is possible that certain age/sex groups are too small to provide meaningful estimates for their corresponding class in the total population. A further set of tests was therefore carried out on the individual categories. For a binomial distribution, 95 per cent of random samples of size n will have a value of p in the range:

$$P \pm 1.96 \sqrt{\frac{P(1-P)}{n}}$$

where p is the proportion of the sample and P the proportion of the population with the attribute.¹⁵ For example, the proportion of the total sample population who are male and under one year old can be tested for representativeness. The results are given in Table 2.2. It can be seen that every category used is within the range desired.¹⁶

V

At certain points in the research it was useful to have information on individuals from the preceding census, that of 1871. A limited record linkage

TABLE 2.2

REPRESENTATIVENESS OF THE AGE AND SEX DISTRIBUTION
OF THE GRANTHAM CENSUS SAMPLE, 1881.

<u>AGES</u>	<u>POPULATION (%)</u>	<u>SAMPLE (%)</u>
<u>Males</u>		
0-	1.54 (\pm 0.26)	1.46
1-	1.38 (\pm 0.25)	1.33
2-	1.48 (\pm 0.26)	1.48
3-	1.33 (\pm 0.25)	1.39
4-	1.37 (\pm 0.25)	1.28
5-	5.93 (\pm 0.51)	5.62
10-	5.12 (\pm 0.48)	4.85
15-	4.71 (\pm 0.46)	4.66
20-	4.24 (\pm 0.43)	4.34
25-	7.28 (\pm 0.56)	7.19
35-	5.69 (\pm 0.50)	5.31
45-	3.74 (\pm 0.41)	3.89
55-	2.79 (\pm 0.35)	2.74
65-	1.53 (\pm 0.26)	1.59
75-	0.52 (\pm 0.16)	0.56

(Continued on next page)

TABLE 2.2 Continued

<u>AGES</u>	<u>POPULATION (%)</u>	<u>SAMPLE (%)</u>
<u>Females</u>		
0-	1.54 (\pm 0.26)	1.59
1-	1.50 (\pm 0.26)	1.44
2-	1.52 (\pm 0.26)	1.51
3-	1.31 (\pm 0.25)	1.24
4-	1.14 (\pm 0.23)	1.06
5-	6.06 (\pm 0.52)	6.09
10-	5.88 (\pm 0.51)	6.05
15-	5.32 (\pm 0.48)	5.66
20-	4.85 (\pm 0.47)	5.21
25-	7.34 (\pm 0.57)	7.20
35-	5.52 (\pm 0.49)	5.39
45-	3.99 (\pm 0.42)	4.11
55-	2.77 (\pm 0.35)	3.10
65-	1.89 (\pm 0.29)	1.68
75-	0.72 (\pm 0.18)	0.85
	<hr/> 100.00	<hr/> 99.87

Source: C.E.B.s. Census Report, 1881

Note: The figures in parenthesis are the range within which 95% of samples should lie. Allen (1966), pp.162-3. These have been adjusted by the 'finite population correction'. Schofield (1972), p.161.

exercise was therefore carried out using the Scunthorpe district data set.¹⁷ Three sets of data were obtained.

1) First, a general search was conducted for all male 'family heads' who appeared to have in-migrated since 1871. The analysis was restricted to males because of the difficulty in tracing women back in time owing to their change of surname at marriage. 'Family heads' are those males who are not dependent children, as described above. Each 'family head' can possess between one and four 'pointers' to his location in the previous census. A single man, or a childless married man, has one 'pointer': his birthplace. A married (or widowed) man with children can have up to four 'pointers': in addition to his own birthplace he may have the birthplaces of an eldest child aged under 10, a youngest child over 10 and a child of exactly 10 (though most fathers possess just two or three 'pointers'). The information of these 'pointers' was used to try to locate individuals in the 1871 census. Of course, owing to imperfect enumeration many people actually possessed fewer 'pointers' than they potentially might have done. Men aged 45 and above with only one 'pointer' (their birthplace) were not searched for, as the chances of them being resident in their birthplace 35 years after their birth were not great. Similarly, those married men whose only co-resident child was aged 20 or above were also excluded.

Geographical constraints were also imposed. The general search of the 1871 census was restricted to locations in Lincolnshire or the nearby counties of Yorkshire, Nottinghamshire and Derbyshire. Within this area, all towns with a population above 10,000 were excluded for practical reasons. Males who appear to have resided in one of the other townships within the overall Scunthorpe study district in 1871 were also searched for.

2) Besides this general search, selected migrants were searched for in their

origin communities in Devon, Essex, Staffordshire and Worcestershire. This material was used for illustrative purposes at various stages of the research.

3) In addition, the whole of the population of the largest township, Scunthorpe itself, was traced forwards between 1871 and 1881. This was to provide some illustrative material on the topics of population turnover and occupational mobility in the district.

The following criteria were used to establish the worth of any potential linkage:

1. For single individuals: same surname, first Christian name, additional Christian names or initials where present, age (within two years) and birthplace. Occupation was not used because the main object of the exercise was to establish the individual's previous employment.
2. For individuals within the same family at both censuses: the above rules apply, together with a relaxation of one error (including age but to within five years) for every two members of a family present in both years.

These rules are those used by Anderson in his work on Preston, with certain modifications.¹⁸ They proved, if anything, even more appropriate in this research, given that the problem of homonymy (and thus false linkages) was much less in a small village than in a large northern industrial town. Where surnames were duplicated, it more often than not seemed to be members of the same, perhaps extended, family. In such cases age usually proved to be the sufficient differentiating factor between two persons.

Unfortunately, the information gleaned from this exercise was of very limited use. For one thing, the laborious effort yielded relatively little success. In total, information was gathered on 316 traced individuals (Table 2.1). Once these were broken down, say, by present occupation and previous locality very few cases remained.¹⁹ More fundamentally, the very fact that individuals were selected for searching because of the availability of certain information in itself precludes much analysis. For example, little of any value could be said about

changing family structure among those who migrated since the successful tracing of any particular case was itself heavily dependent upon the presence of co-resident offspring. In addition, because of the criteria which had to be used, those traced were not representative of all migrants to the district. For these reasons, the material gathered in this exercise is used sparingly in the following text.

VI

The statistical analysis undertaken in this project is mainly presented in tabular form. The intention has been to present as much detailed information as possible in the tables themselves and so keep the text relatively uncluttered. This applies to all the data used, not just that derived from the census books. Tests of significance are performed where they are felt to be appropriate. Significance levels down to 0.20 are usually reported; lower levels than this are given as 'not significant' unless explicitly stated otherwise. The absence of a test result does not necessarily denote an insignificant difference. Lastly, it must be stated that visitors are excluded from all the analysis of the manuscript census material except where explicitly stated to the contrary.

CHAPTER 3. AGGREGATE MIGRATION PATTERNS

'...at the present rate of decrease in two or three more decades our villages will be quite depopulated, and our fields a wilderness'.¹

So wrote Henry Winn, parish clerk, sometime schoolmaster, and census enumerator of the Lincolnshire village of Fulletby, after the taking of the 1891 census. Such fears were widespread in the later Victorian period, as census after census revealed a shrinking of the rural population.² The trend seemed irreversible, the outcome inevitable:

'...in a few more decades all remaining of Fulletby, and many other villages, will be a ruinous church, and a few ill-tilled farms, a name, and the everlasting hills'.³

These fears were never fulfilled, but they are quite understandable: rural England in this period saw a flight from the land of unprecedented magnitude.⁴ This chapter outlines the characteristics of this shift of population in the county of Lincolnshire in the second half of the nineteenth century.

* * * * *

The movement of population from countryside to town was heavy and continuous throughout the second half of the nineteenth century.⁵ As a predominantly agrarian region⁶, Lincolnshire saw an increasing proportion of its natives leaving the county, and suffered a net loss of migrants in every decade for which figures are available. This is illustrated in Table 3.1. The losses of the 1840s were small compared with those in subsequent decades, and the most severe net losses occurred in the 1850s and 1880s. The 1860s saw migration erode more of the natural increase than did the 1870s. Interestingly, this pattern does not wholly accord with general economic fortunes in the county, a point which will be developed more fully in the next chapter.

TABLE 3.1 COUNTY-LEVEL MIGRATION DATA, LINCOLNSHIRE 1801-1901

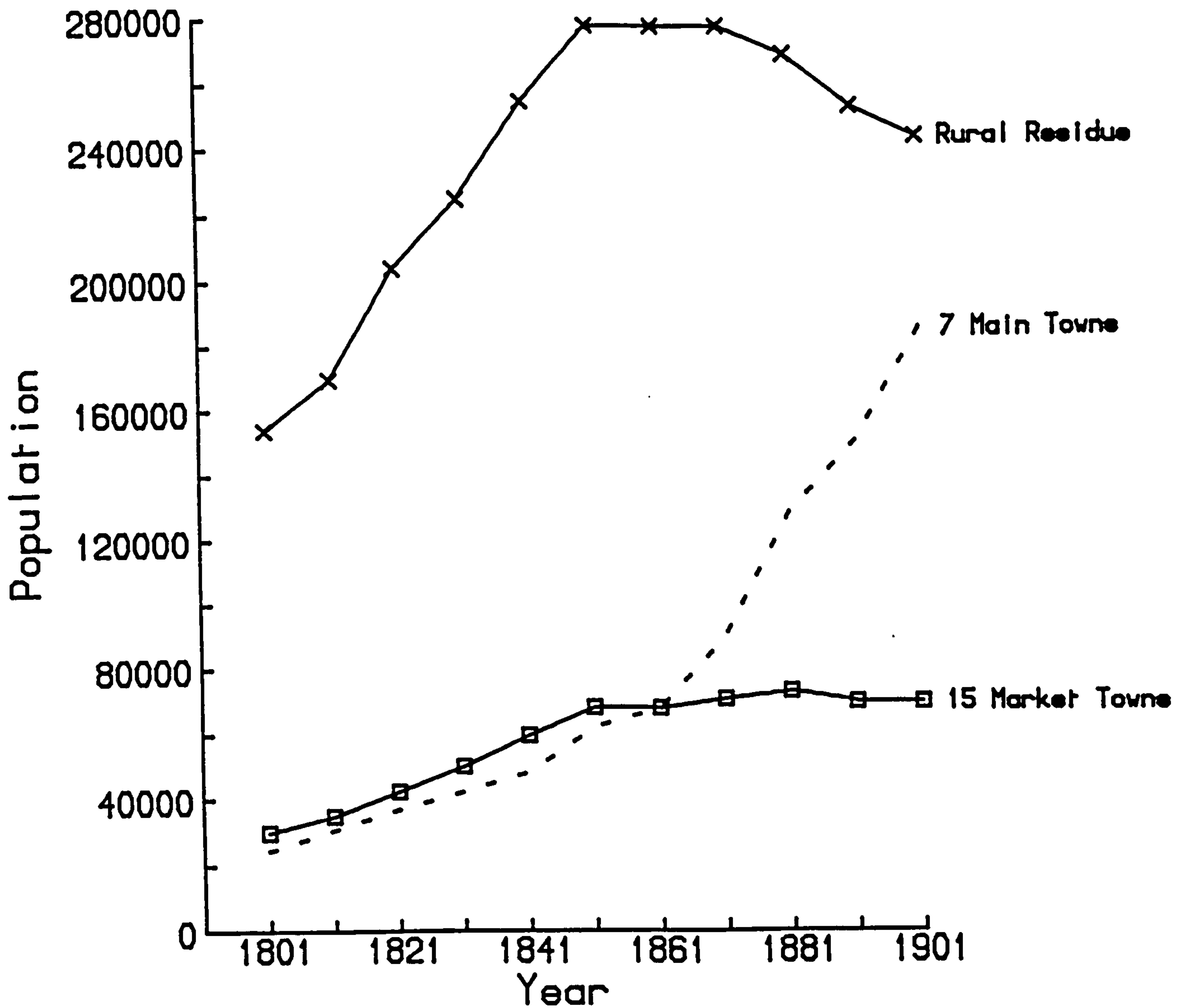
(a) <u>Population</u> <u>of the</u> <u>Civil County</u>		(b) <u>% Lincolnshire natives enumerated</u> <u>elsewhere in England and Wales,</u> <u>1851-1901</u>		
		<u>Males</u>	<u>Females</u>	<u>Total</u>
1801	208625	1851	Not available	19.9
1811	235224	1861	19.8	21.0
1821	283058	1871	24.0	25.3
1831	317288	1881	27.0	29.0
1841	362602	1891	30.8	32.9
1851	407222	1901	32.5	34.5
1861	412246			33.5
1871	436624	(All figures are for the Civil County except 1851 where the Registration County is used).		
1881	469947			
1891	472907			
1901	498868			

(c) Net migration and natural increase, Registration County

	<u>Natural</u> <u>increase</u>	<u>Net</u> <u>migration</u>	<u>Net migration as a</u> <u>% of natural increase</u>
1841-50	56386	-12376	21.9
1851-60	56054	-52153	93.0
1861-70	61304	-37372	61.0
1871-80	64858	-29872	46.1
1881-90	59473	-55253	92.9
1891-1900	53814	-28101	52.2

Source: Census Reports, 1851 to 1901 ; Registrar General's
Annual Reports, No.s 9 to 13.

Note: Births have been corrected for underregistration
using the 'adjustment factor' for Lincolnshire
calculated by Teitelbaum (1974).



KEY

- 7 Main towns - Boston, Cleethorpes, Gainsborough, Grantham, Grimsby (with New Clee), Lincoln, Scunthorpe.
- 15 Market towns - Alford, Barrow on Humber, Barton on Humber, Bourn, Brigg, Crowland, Crowle, Holbeach, Horncastle, Long Sutton, Louth, Market Rasen, Sleaford, Spalding, Stamford.

Figure 3.1

Lincolnshire population trends, 1801-1901.

Source: Census Reports, 1851-1901.

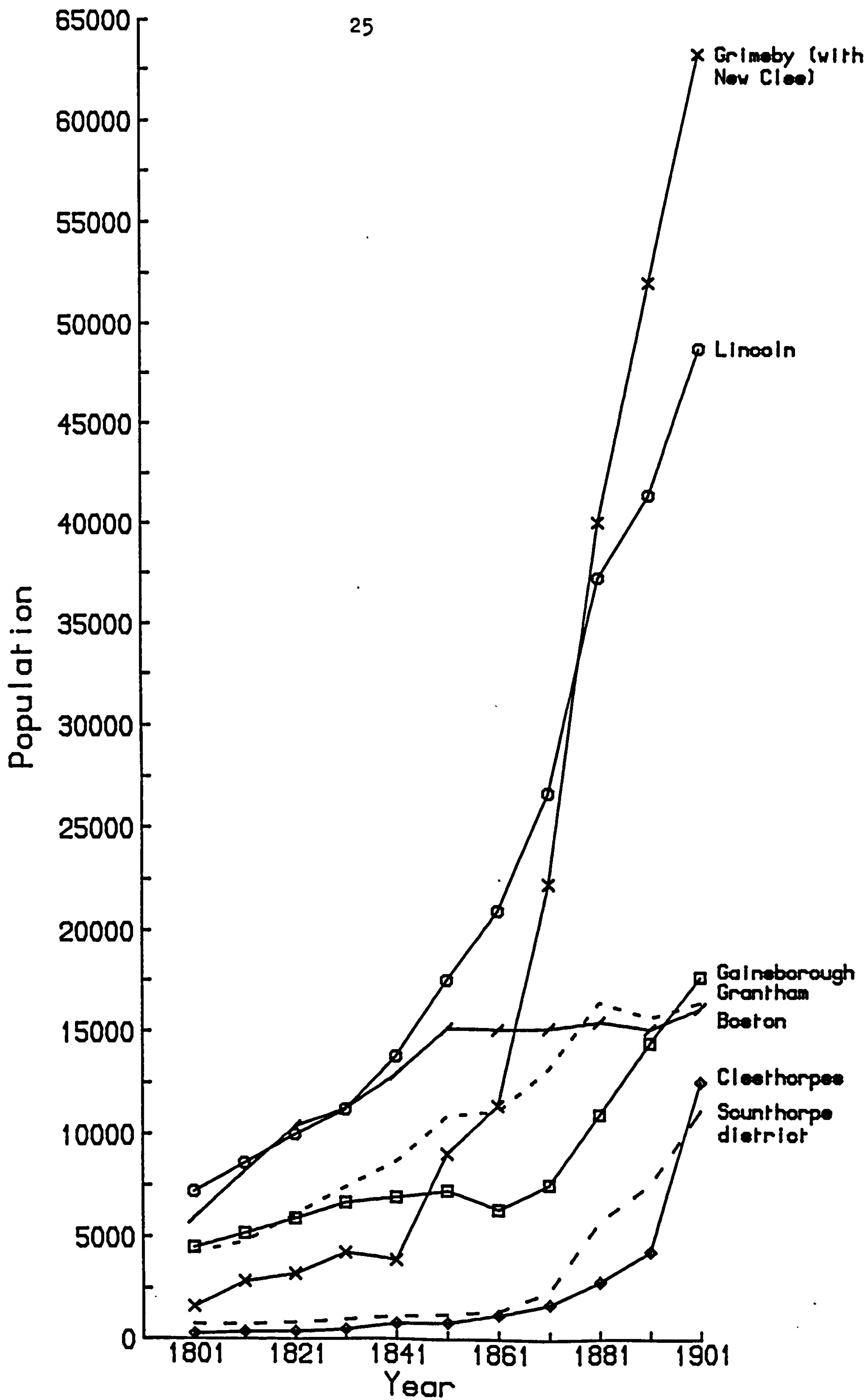


Figure 3.2 Population trends in 7 main towns, Lincolnshire 1801-1901.

Source: Census Reports, 1851-1901.

TABLE 3.2 CRUDE ESTIMATES OF INTERCENSAL MIGRATION FLOWS (NET OF RETURNS)
LINCOLNSHIRE 1851-1900 (1000s)

		<u>To rest of England and Wales</u>		<u>To Ireland, Scotland and abroad</u>		<u>Natives of other English and Welsh counties into Lincolnshire</u>	
		<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
1851-60	(a)	26		23		-1	
	(b)	(32)		(21)		(3)	
	(c)	(21)		(24)		(-4)	
1861-70	(a)	23	23	6	4	8	8
	(b)	(27)	(27)	(4)	(2)	(10)	(10)
	(c)	(19)	(20)	(7)	(5)	(6)	(7)
1871-80	(a)	23	25	7	4	15	12
	(b)	(28)	(30)	(5)	(2)	(18)	(15)
	(c)	(18)	(21)	(9)	(7)	(13)	(10)
1881-90	(a)	25	27	12	7	5	8
	(b)	(30)	(32)	(10)	(4)	(8)	(10)
	(c)	(19)	(22)	(15)	(10)	(2)	(6)
1891-1900	(a)	19	19	8	5	10	12
	(b)	(24)	(25)	(5)	(2)	(13)	(14)
	(c)	(12)	(13)	(11)	(9)	(7)	(9)

Crude estimates expressed as a proportion of the county population
in base year

Lincolnshire natives

	<u>To rest of England and Wales (%)</u>		<u>To Ireland, Scotland and Abroad (%)</u>	
	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
1851 - 60		6.4		5.6
1861 - 70	11.2	11.1	2.9	1.9
1871 - 80	10.6	11.4	3.2	1.8
1881 - 90	10.6	11.5	5.1	3.0
1891 - 1900	8.1	7.9	3.4	2.1

(Continued on next page)

TABLE 3.2 continued

Source: Census Reports, 1851-1901.

Notes: 1) The 1851 census did not break down birthplace information by sex.

- 2) Row (a) contains estimates based on the preferred assumption that the migrant death rate is $\frac{2}{3}$ the national rate.

Rows (b) and (c) contain the upper and lower estimates between which the true value must lie. Row (b) assumes a migrant death rate the same as that of England and Wales as a whole, while row (c) assumes that all migrants are aged 15-34.

See Appendix A for a detailed explanation of how these estimates were calculated.

- 3) The Ancient County unit is used.

Absolute population decline in Lincolnshire was avoided only through the presence of several expanding urban centres. The largest two were Lincoln and Grimsby (Figures 3.1, 3.2 and 3.3).⁷ The rural population ceased to grow as early as the 1840s, and fell sharply in the last third of the century. The county's many market towns did no more than maintain their populations after mid-century.⁸

Table 3.2 represents an attempt to get beyond net migration to some of its component flows using the method devised by Dudley Baines.⁹ It contains estimates of the flow of natives out of Lincolnshire into other parts of the country and overseas between censuses, together with the intercensal flow into the county of those born elsewhere in England and Wales. Several points must be made. First, the estimates are very, very crude indeed, although the Table does include the range within which the true value must lie. Second, the estimates are net of return migrants, so each figure conceals a counter-flow of returning natives of unknown magnitude. These are not, then, gross flows. Third, the Table does not contain estimates of Irish, Scottish or foreign immigration into Lincolnshire. Lastly, the estimates are based on the 'Ancient' or 'Civil County' unit, while the figures in Table 3.1 use the 'Registration County'. Nevertheless, Table 3.2 sketches the broad composition of the net loss in each decade, and it is encouraging to note that the very general pattern of net migration implied by these estimates follows that in Table 3.1. A full explication of the derivation of these estimates is given in Appendix A.

There are several points of interest. The heavy loss of the 1850s seems almost wholly attributable to negligible movement into Lincolnshire coupled with heavy emigration abroad. This is not surprising. Much of the county's urban and industrial expansion was still to come and it held limited attraction to those from afar. Furthermore, the 1850s saw a sharp increase in

emigration nationally. As far as the movement of Lincolnshire natives to the rest of England and Wales is concerned, the 1850s now appear as a decade of markedly low migration loss. The sharp increase in this outward flow occurs, rather, in the next decade, the 1860s, when it seems to have almost doubled. This loss of population is maintained in the next two decades, with a slight increase in the 1880s – the decade of most hardship on the land. It falls in the last decade of the century, as is reflected in the net migration figure in Table 3.1.

Emigration abroad followed a rather different path. It seems to have fallen markedly after the 1850s, with about one native emigrating for every four or five who moved to another county in the 1860s and 1870s. The 1880s were the lowest point in agricultural fortunes and witnessed a sharp peak in emigration, in line with the national picture.¹⁰

The movement of population into the county from elsewhere is harder to explain. The general increase after the 1850s undoubtedly reflects, in part, the growth of the urban centres shown in Figures 3.1 and 3.2 and 3.3. The influx rose still further in the 1870s, and this seems to account for the lower level of net migration loss in that decade than in the 1860s (Table 3.1) which caused surprise above. This rise was checked abruptly in the 1880s, especially among males. This probably reflects the depression in both agricultural and industrial sectors in these years. The influx resumed its upward path in the 1890s.

The crude estimates suggest that the number of females leaving Lincolnshire for other parts of the country either matched or exceeded the number of males who made such a move, while males clearly dominated the stream of migration abroad. This again fits with the national pattern.¹¹ The sexual balance of movement into the county varied from decade to decade and does

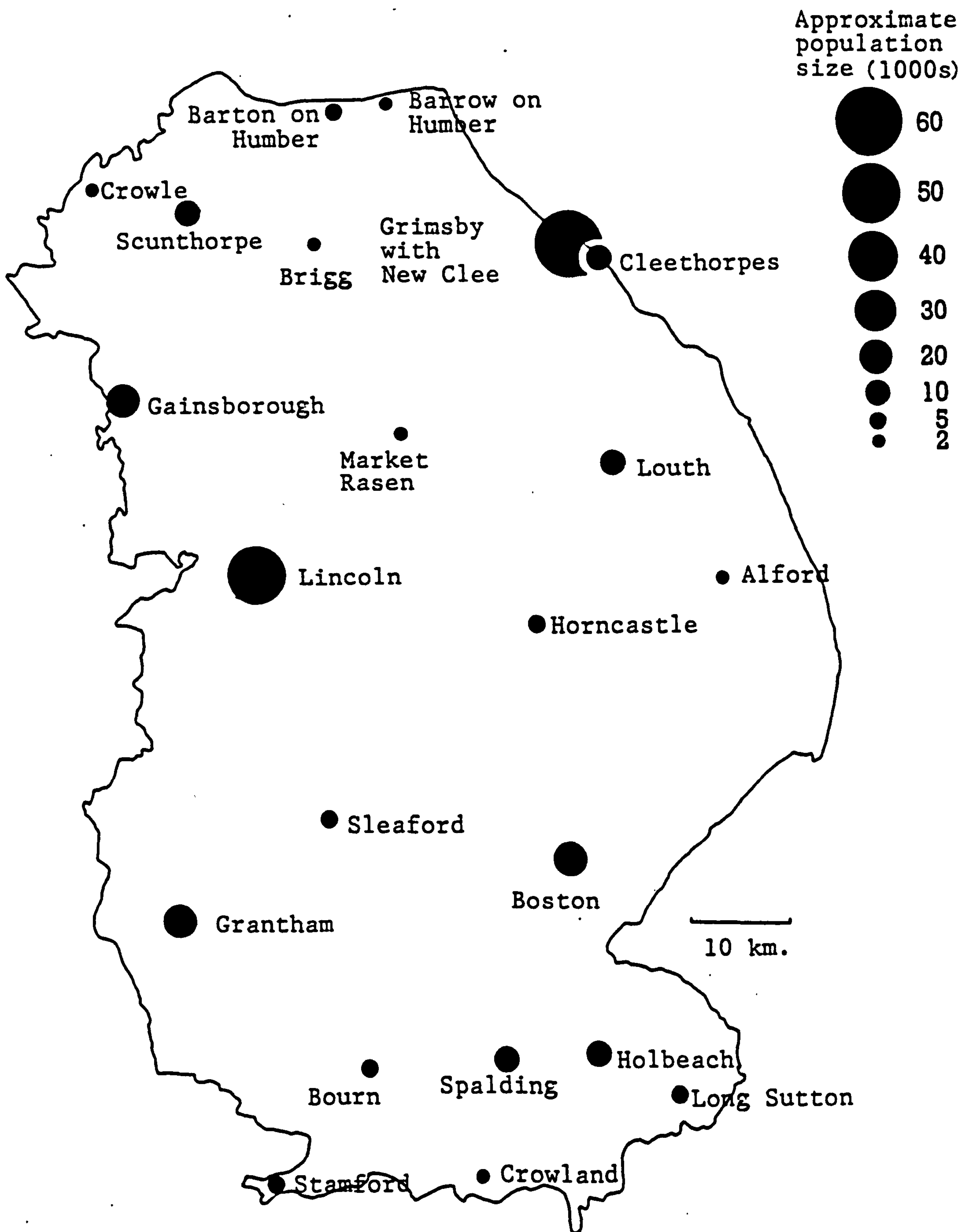


Figure 3.3

Lincolnshire towns at the end of the nineteenth century.

Source: Census Report, 1901.

Figure 3.4

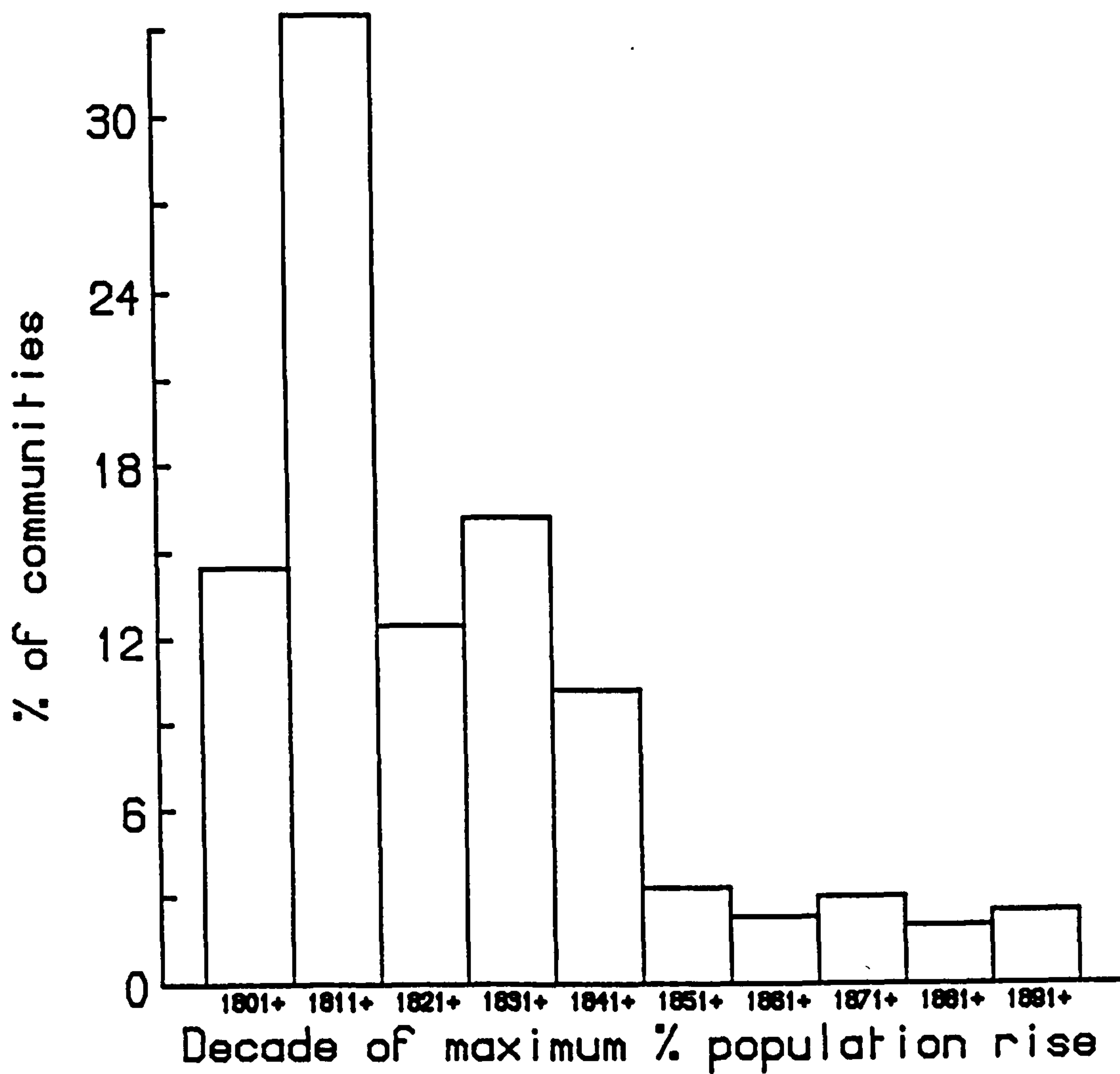
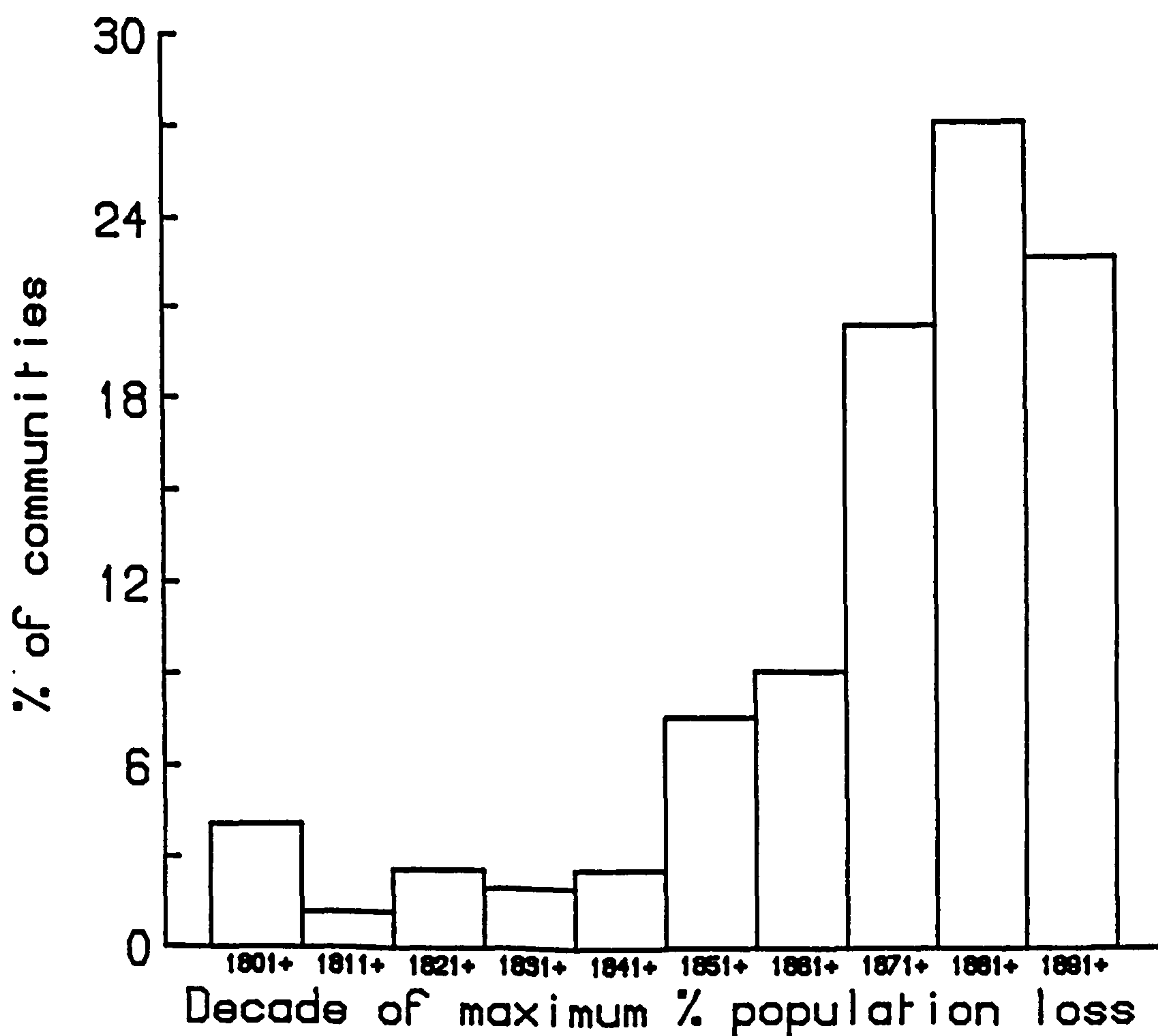


Figure 3.5



Figures 3.4 and 3.5

Decade of maximum proportionate population rise and loss, Lincolnshire rural communities 1801-1901.
Source: Census Reports, 1851-1901.

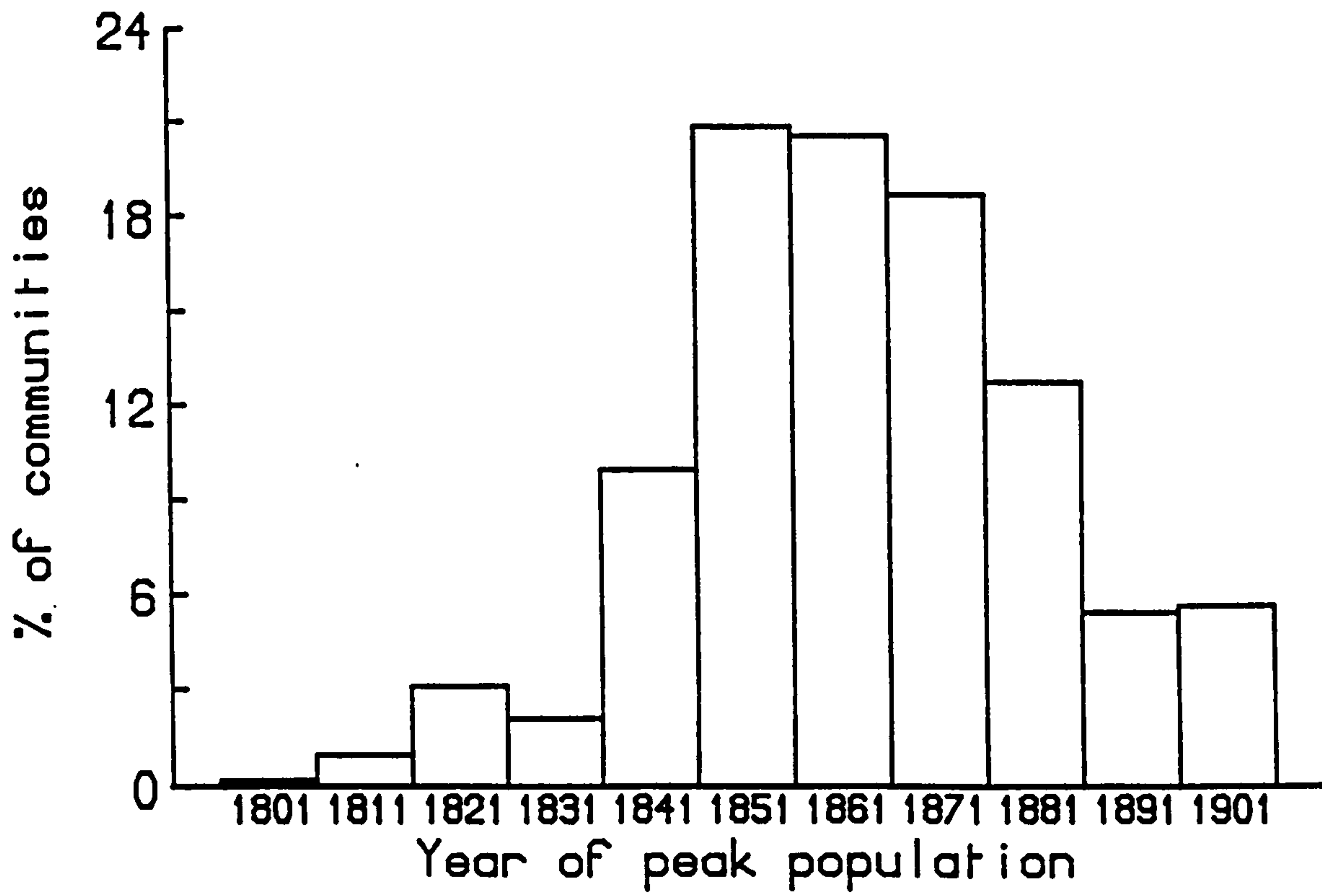


Figure 3.6

Census of peak population, Lincolnshire rural communities 1801-1901.

Source: Census Reports, 1851-1901.

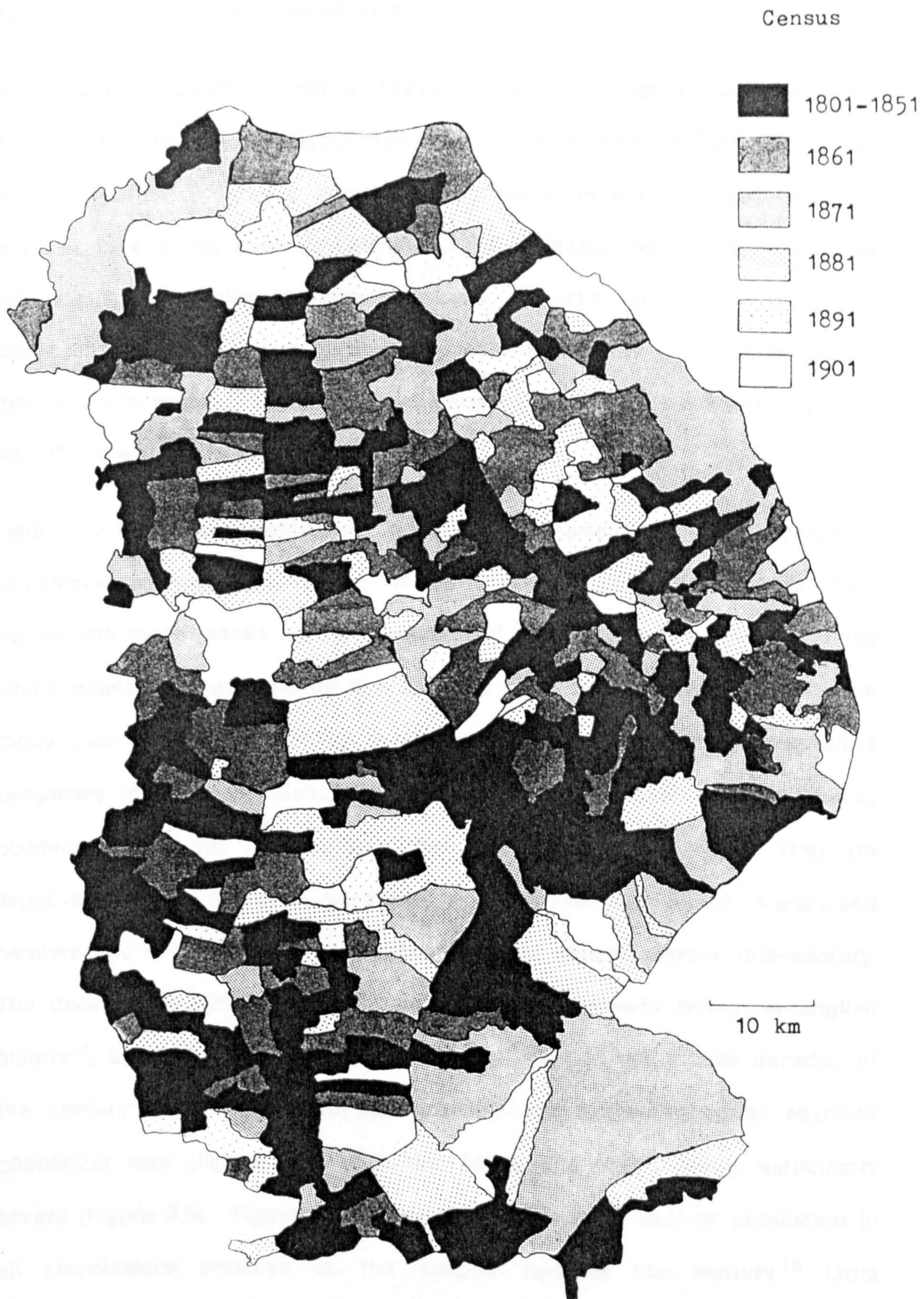


Figure 3.7

Census of peak population, Lincolnshire parishes 1801-1901.

Source: Census Reports, 1851-1901.

not permit of any simple explanation.

Net migration totals obviously conceal important aspects of population movement at the county level. How well the estimates of Table 3.2 reflect the true balance of flows is uncertain, as is the composition of any particular flow. It is a gross over-simplification, but probably not wholly wrong, to attribute most of the movement inwards to urban/industrial/commercial/developments, and a substantial part of the outflow to decline in the rural/agrarian sector.¹² It must be remembered, however, that most migration took place within the county boundaries.

Figures 3.4 to 3.6 profile the population experience of 606 individual Lincolnshire villages and hamlets in the nineteenth century. This 606 does not include those places with a population of over 2500, nor any communities which appear to have served the function of a town.¹³ Also excluded are those places which, according to the published census notes, received a temporary influx of population in any census year, usually through railway building. These 606 communities, then, are unequivocally rural. They are listed in Appendix B. Figure 3.4 shows that the vast majority of villages and hamlets had experienced their highest rate of growth before mid-century. The decade 1811-20 saw the fastest population growth known in English history¹⁴, and this is reflected in the Figure. During the middle decades of the century most places stopped growing and began to suffer absolute population loss (Figure 3.5), with the 1870s and 1880s being particularly severe (Figure 3.6). Figure 3.7 shows the peak census year of population in all Lincolnshire parishes in the second half of the century.¹⁵ Little geographical pattern seems evident. The early peaks in many of the parishes to the north and south of Grantham are artificial: the Great Northern Railway was being constructed here on census Sunday 1851.¹⁶ There was little temporal consistency: village population loss in one decade seems to have

borne little relationship to the decline in the next (Table 3.3).

Several authors have pointed out that it was the more isolated rural communities which experienced the most dramatic loss of population. Orwin and Whetham, for example, have concluded that 'in general the more remote the area the greater the decline'.¹⁷ Analysis at the national level certainly shows that the more remote agrarian Registration Districts lost more population than did those nearer to urban growth points, and a similar pattern has been found at parish level in a study of rural Yorkshire.¹⁸ Yet the generally accepted view is that most migration occurred over short distances and that towns drew the bulk of their migrants from the surrounding locality. For both scenarios to be equally valid would entail a massive process of step migration with replacement, whereby those from more isolated places moved to areas nearer towns, replacing individuals who had moved to the town. This would both satisfy the logic of distance-decay and result in remote rural areas suffering the largest net loss. This process was identified by Ravenstein in his second 'law' of migration:

'The inhabitants of the country immediately surrounding a town of rapid growth flock into it; the gaps this left in the rural populations are filled up by migrants from more remote districts, until the attractive force of one of our rapidly growing cities makes its influence felt, step by step, to the most remote corner of the kingdom'.¹⁹

But even this regime would surely break down over time, as some of those who had moved to the hinterland themselves migrated to the town to be recorded as long-distance movers by dint of their place of birth (that is, simple step migration). Moreover, it would imply that the bulk of the rural exodus from the remoter areas was not directed to the towns at all, which seems implausible. Less 'remote' rural districts would have experienced little migration loss and even a net gain.

TABLE 3.3 **ZERO-ORDER CORRELATION COEFFICIENTS BETWEEN
PROPORTIONAL POPULATION DECLINE IN TWO SUCCESSIVE
DECADES, LINCOLNSHIRE VILLAGES AND HAMLETS,
1841-1901**

<u>Decade of comparison</u>	<u>r</u>	<u>Significance</u>	<u>(N)</u>
1850s with 1840s	0.35	$p < 0.01$	(72)
1860s with 1850s	0.12	$p < 0.10$	(142)
1870s with 1860s	0.07	$p < 0.20$	(220)
1880s with 1870s	0.16	$p < 0.01$	(306)
1890s with 1880s	0.00	not significant	(341)

Source: Census Reports, 1851-1901

Notes: Only decades of successive population decline were included in the analysis.

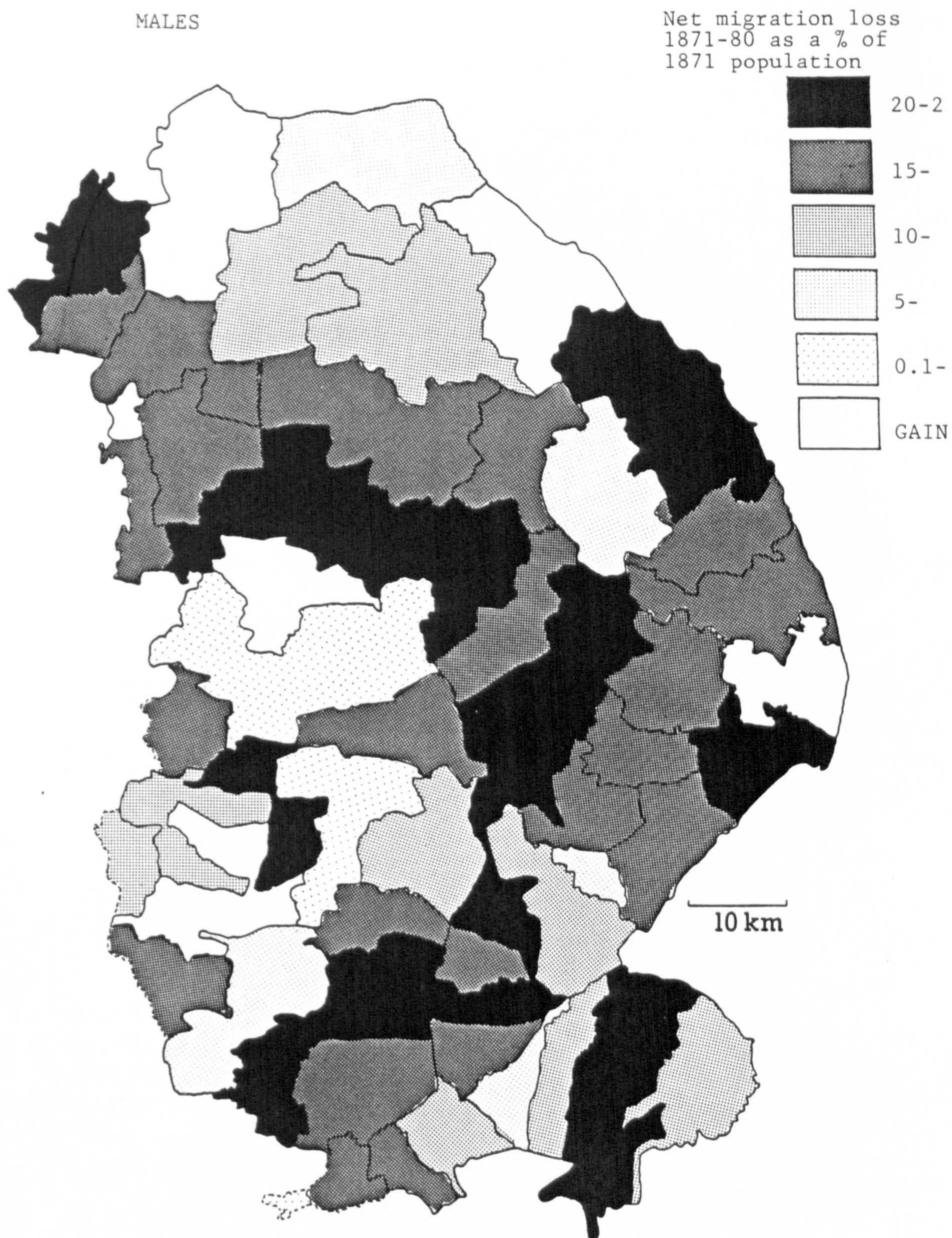


Figure 3.8

Net migration patterns, Registration Sub-Districts,
Lincolnshire 1871-80.

Source: Census Report, 1881; Registrar General's Annual Reports, 1871-80.

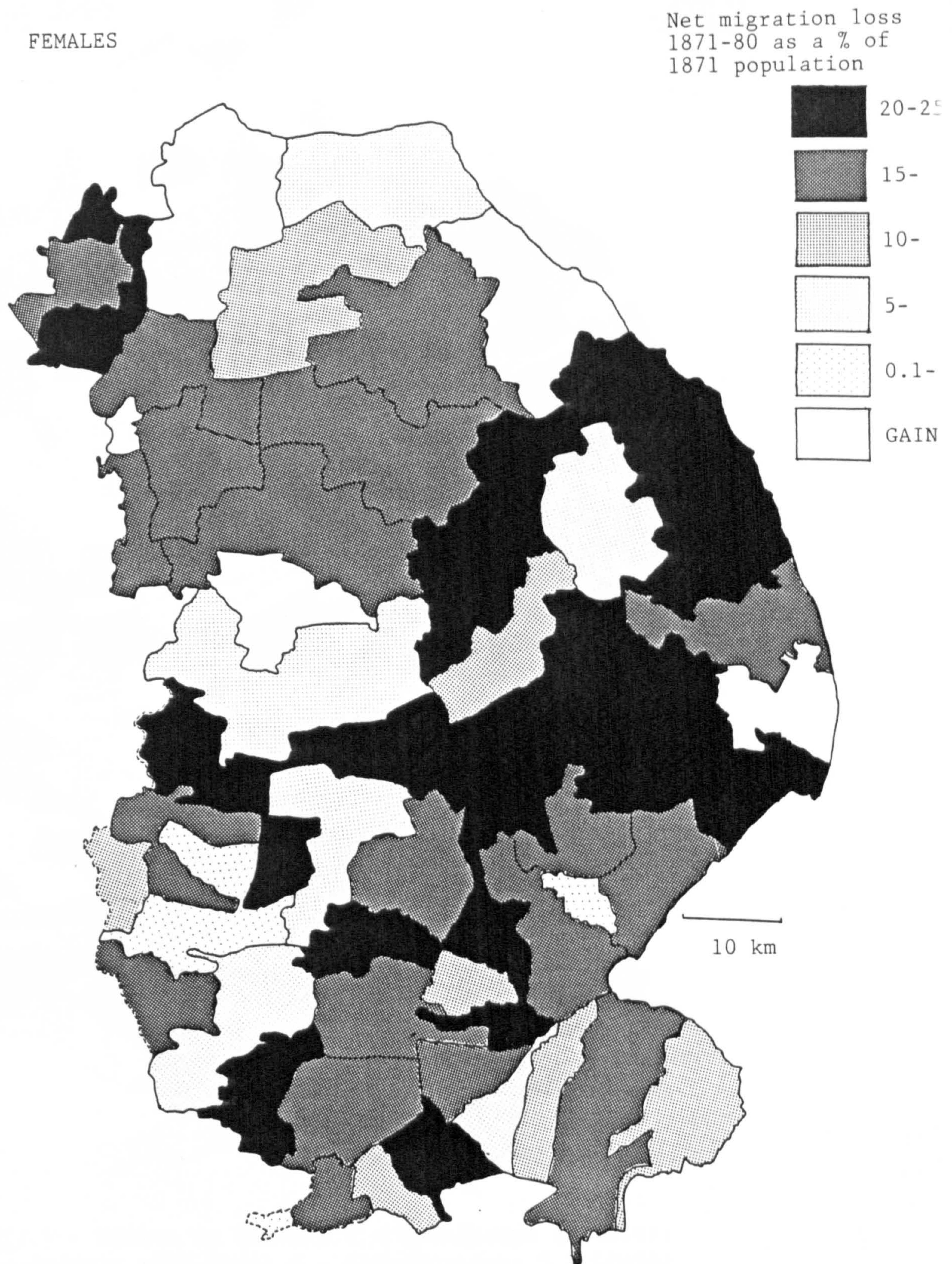
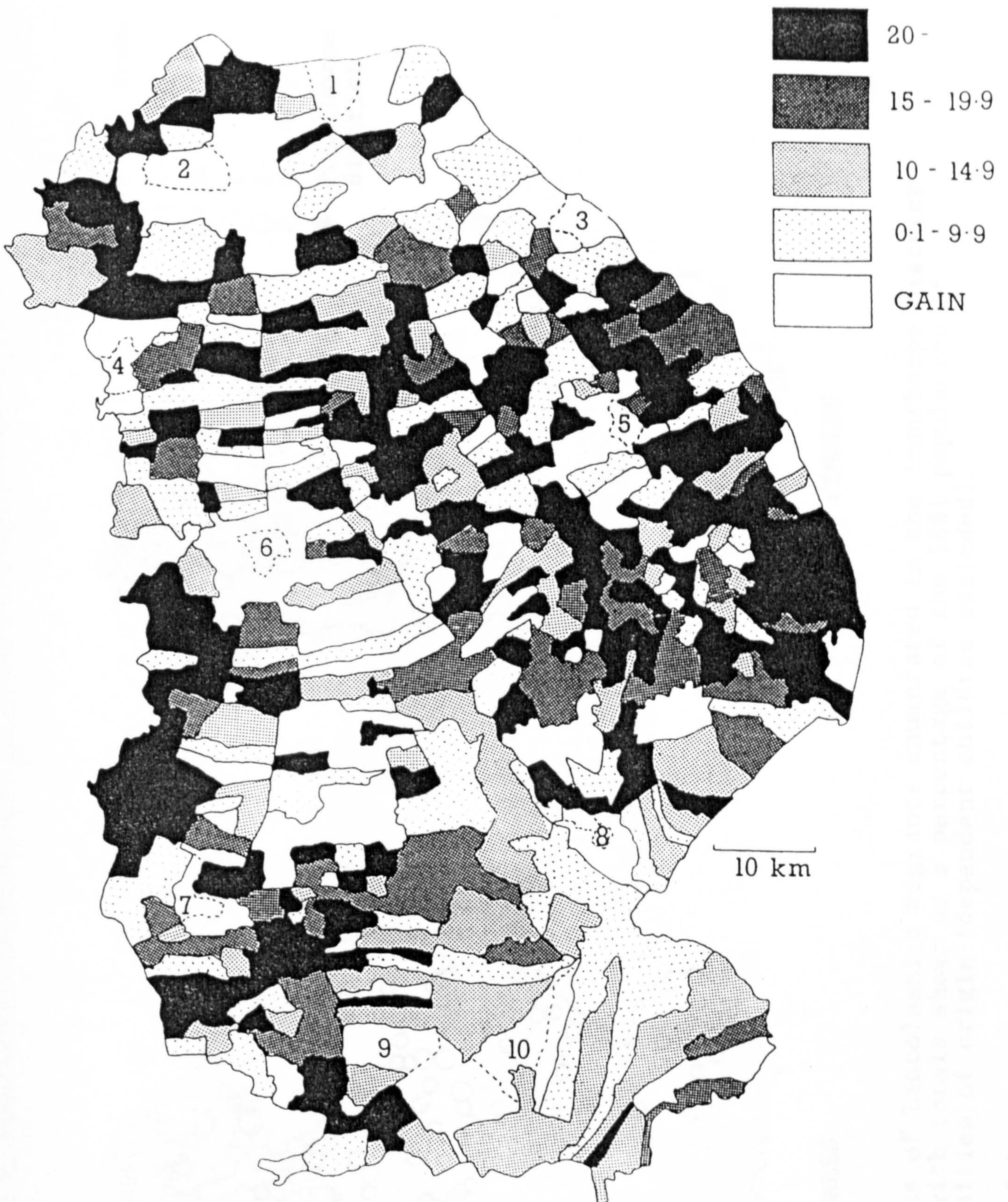


Figure 3.9 Net migration patterns, Registration Sub-Districts,
Lincolnshire 1871-80.
Source: Census Report, 1881; Registrar General's Annual
Reports, 1871-80.

Percentage decline



KEY: 1 - Barton on Humber; 2 - Scunthorpe district;
 3 - Grimsby with Clee; 4 - Gainsborough; 5 - Louth;
 6 - Lincoln; 7 - Grantham; 8 - Boston; 9 - Bourn;
 10 - Spalding.

Figure 3.10

Total population decline 1861/71 to 1891/1901
 Lincolnshire parishes.

Source: Census Reports, 1871 and 1901.

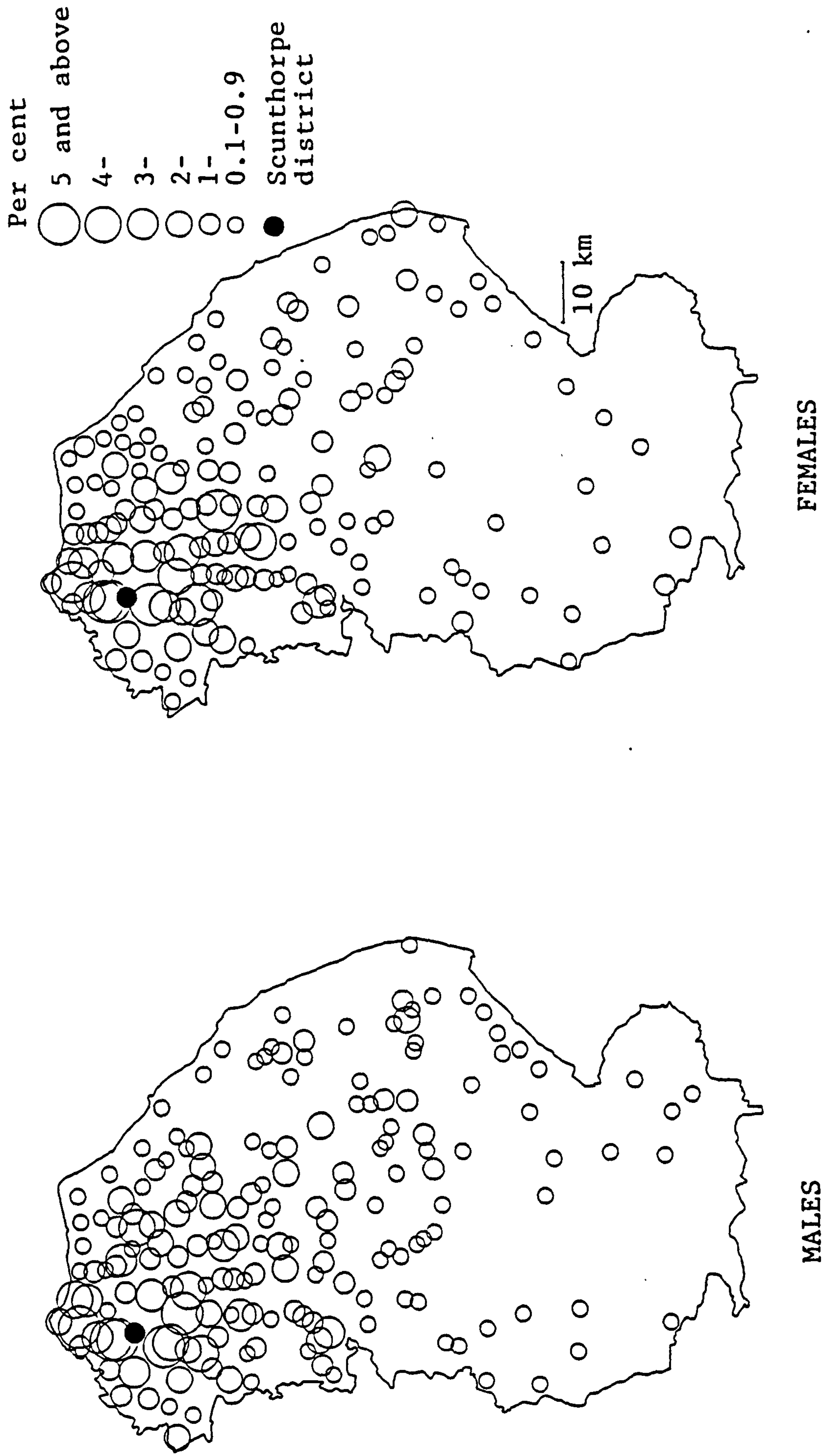


Figure 3.11 Birthplaces of Lincolnshire migrants enumerated in the Scunthorpe district in 1881, with totals shown as a percentage of the 1881 population of the communities of origin (dependent children excluded).

Source: C.E.B.s

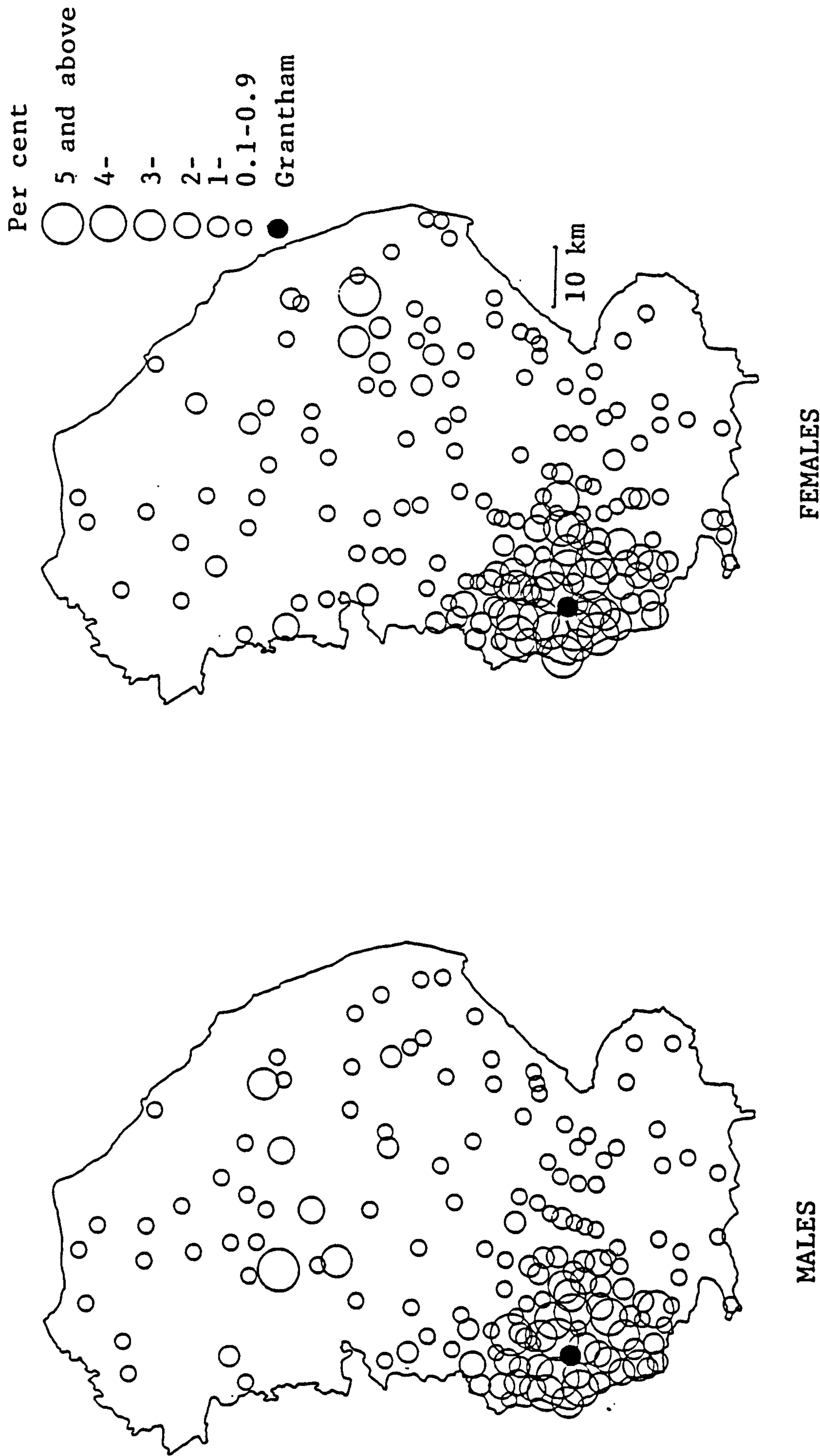
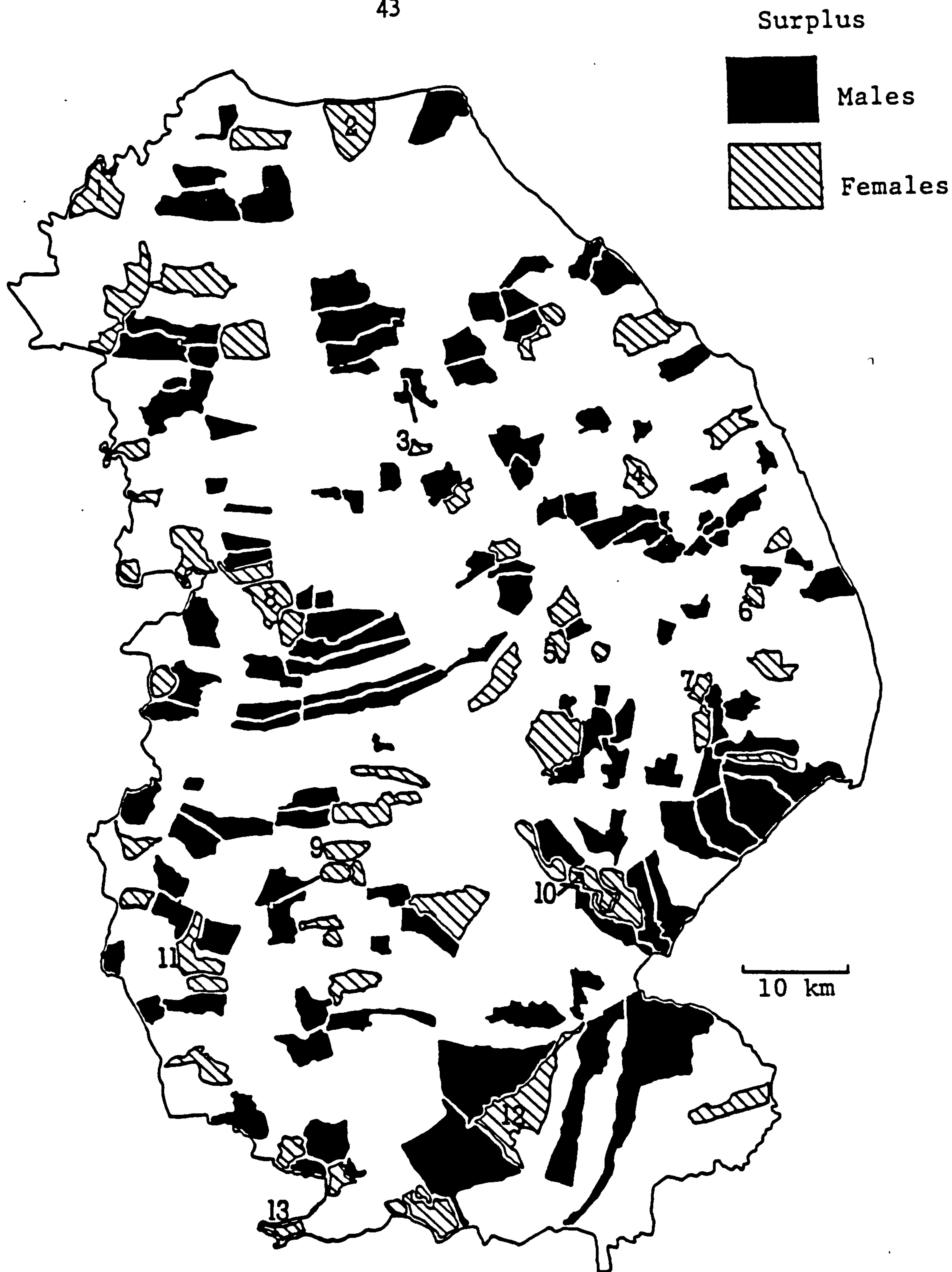


Figure 3.12 Birthplaces of Lincolnshire migrants enumerated in the Grantham sample in 1881, with totals shown as a percentage of the 1881 population of the communities of origin (dependent children excluded).

Source: C.E.B.s

Figures 3.8 and 3.9 show the spatial pattern of net migration loss in Lincolnshire in the 1870s. Many of the Registration Sub-Districts adjacent to Grimsby and Lincoln experienced some of the most severe losses (these can be located with the help of Figure 3.3), suggesting remote areas were not the hardest hit, but it is impossible to discern any really clear pattern. Figure 3.10 plots the cruder measure of ~~total~~ population decline, but at the more detailed level of the parish. This map supports the hypothesis that remote areas suffered the worst losses. Many parishes near to expanding urban centres (shown in the Figure) experienced an increase in population during the latter part of the century. This was especially marked around Lincoln and in the north of the county around the Scunthorpe district. Lastly, Figures 3.11 and 3.12 show the relative contribution of Lincolnshire communities to the population of Grantham and the Scunthorpe district in 1881. Excepting dependent children, the numbers of Lincolnshire migrants enumerated in either place are shown as a percentage of the total male or female population of the sending community in the same year. These cases reiterate the oft-noted prevalence of short-distance migration. On balance, the Lincolnshire evidence lends only partial support to the view that remote areas suffered the worst losses.²⁰

Who was leaving rural Lincolnshire? It is well-known that females outnumbered males in the exodus. The sex ratio across the 606 rural communities described above was 102.6 in 1881, compared to 100.2 for all Lincolnshire and 94.8 for England and Wales. Figures 3.8 and 3.9 show the pattern of out-migration to have been similar for both sexes, so the sexual imbalance was a fairly general phenomenon and not heavily skewed to particular regions. However, Figure 3.13 does show that the imbalance was particularly severe in a few parishes. The few places where females heavily outnumbered males tended to be market towns where jobs as domestics and



KEY: 1-Crowle; 2-Barton on Humber; 3-Market Rasen;
 4-Louth; 5-Horncastle; 6-Alford; 7-Spilsby; 8-Lincoln;
 9-Sleaford; 10-Boston; 11-Grantham; 12-Spalding; 13-Stamford.

Figure 3.13
 Lincolnshire parishes in which the male or female surplus
 exceeded the county sex ratio by more than one standard
 deviation in 1881.

Source: Census Report, 1881.

in other service occupations were abundant. Such positions could be filled at younger ages than could urban jobs for boys, though there is a tendency in the literature to over-emphasise the concentration of the rural sexual imbalance in early and mid-teens.²¹ Table 3.4 presents some data which suggests things were not so clear-cut. It shows the sexual composition of the Louth and Stamford Registration Districts in 1881, separating the Sub-Districts which contained the market town from the rural remainder. The female surplus in both towns seems evident right through the population, and is not confined to the teens. Moreover, there was actually a female surplus in the rural areas in some of the middle age-groups. The rural male imbalance can, then, be over-stressed.²² The concentration of females in towns was not new, but seems, rather, to have first occurred in the seventeenth century with the expansion of urban service occupations.²³ Figure 3.13 also points to a slight clustering together of parishes with particularly severe female shortages. This suggests, perhaps, a concentration of female labour recruitment on particular districts, or that plentiful jobs for males in agriculture or (on the coast) fishing tended to affect a wider area than just one parish.

We do not know the exact occupational composition of the out-migrant stream. A substantial but unknown proportion had no job before they left the countryside. This group included all those who migrated as dependents, together with those who migrated to take up their first post. Moreover, rural occupations were not the rigid entities implied by census categories.²⁴ Nevertheless, the rural exodus did leave its mark on the occupational composition of the rural community.

Many – if not most – single females appear to have out-migrated to take up a job in service. Most Lincolnshire towns drew their servants from the county's rural areas. In 1871 in Lincoln, for example, 55.1% of domestic servants were migrants born within 20 miles; only 26.5% had come from much farther away.

TABLE 3.4 SEX-RATIOS IN LOUTH AND STAMFORD REGISTRATION DISTRICTS, 1881 (MALES PER 100 FEMALES)

Louth Registration District

<u>Age</u>	<u>Louth Sub-District</u>	<u>All other Sub-Districts</u>
<10	99.3	107.0
10 - 14	98.5	100.4
15 - 19	93.6	113.7
20 - 24	81.0	103.5
25 - 29	85.1	93.3
30 - 34	84.6	93.2
35 - 39	82.2	108.2
40 - 44	79.8	100.6
> = 45	84.4	100.0

Stamford Registration District

<u>Age</u>	<u>Stamford Sub-District</u>	<u>Barnack Sub-District</u>
< 10	101.9	95.9
10 - 14	99.3	96.6
15 - 19	98.5	131.9
20 - 24	77.7	105.0
25 - 29	85.4	105.2
30 - 34	92.3	84.0
35 - 39	88.1	105.0
40 - 44	91.4	93.8
> = 45	86.3	90.4

Source: Census Report, 1881.

- Notes:
- 1) The town of Louth constituted 72.4% of the population of Louth Sub-District at the 1881 census. The town of Stamford constituted 68.4% of Stamford Sub-District.
 - 2) Stamford Registration District comprised just the two Sub-Districts shown here.

This was not necessarily 'normal': in textile towns in other parts of the country servants came from farther afield to counteract the competition of alternative employment. Thus in Bolton, Lancashire, 55.5% of domestic servants came from over 20 miles away.²⁵ This discrepancy is significant in two ways. First, the lack of a major alternative source of employment in Lincolnshire towns meant that service was probably a more important means of rural out-migration among females than it was elsewhere. This is illustrated in Figure 3.14. Lincoln's servants came from the east; females to the west preferred the textile centres of the east Midlands. Second, the shortage of local female domestic labour in towns elsewhere in the country created important openings for Lincolnshire females. In his study of servants in Rochdale, Higgs found increasing numbers being recruited from the Lincolnshire countryside.²⁶

Turning to more male-dominated occupations, rural tradesmen and craftsmen certainly took part in the flight from the land.²⁷ Their numbers appear to have fallen in the second half of the century. Unfortunately it is impossible to separate this group from their urban counterparts in the published census figures, so the size of this decline is unknown.²⁸ In many ways their fortunes were tied to those of agriculture, and they suffered in the depression as much as anyone. At the same time, the railways were bringing more and more factory-produced goods into rural areas. By 1900 many of the well-rounded village economies of earlier decades had gone for ever.²⁹

The bulk of the rural exodus, however, consisted of those directly employed in agriculture, or who would otherwise have been so employed. While it is not clear that agriculture was the main source of out-migrants, this does seem likely.³⁰ Existing census-based village studies provide conflicting evidence on this point. Some find fewer migrants among farm workers than among tradesmen and craftsmen; others do not.³¹ But even when this is the case, it

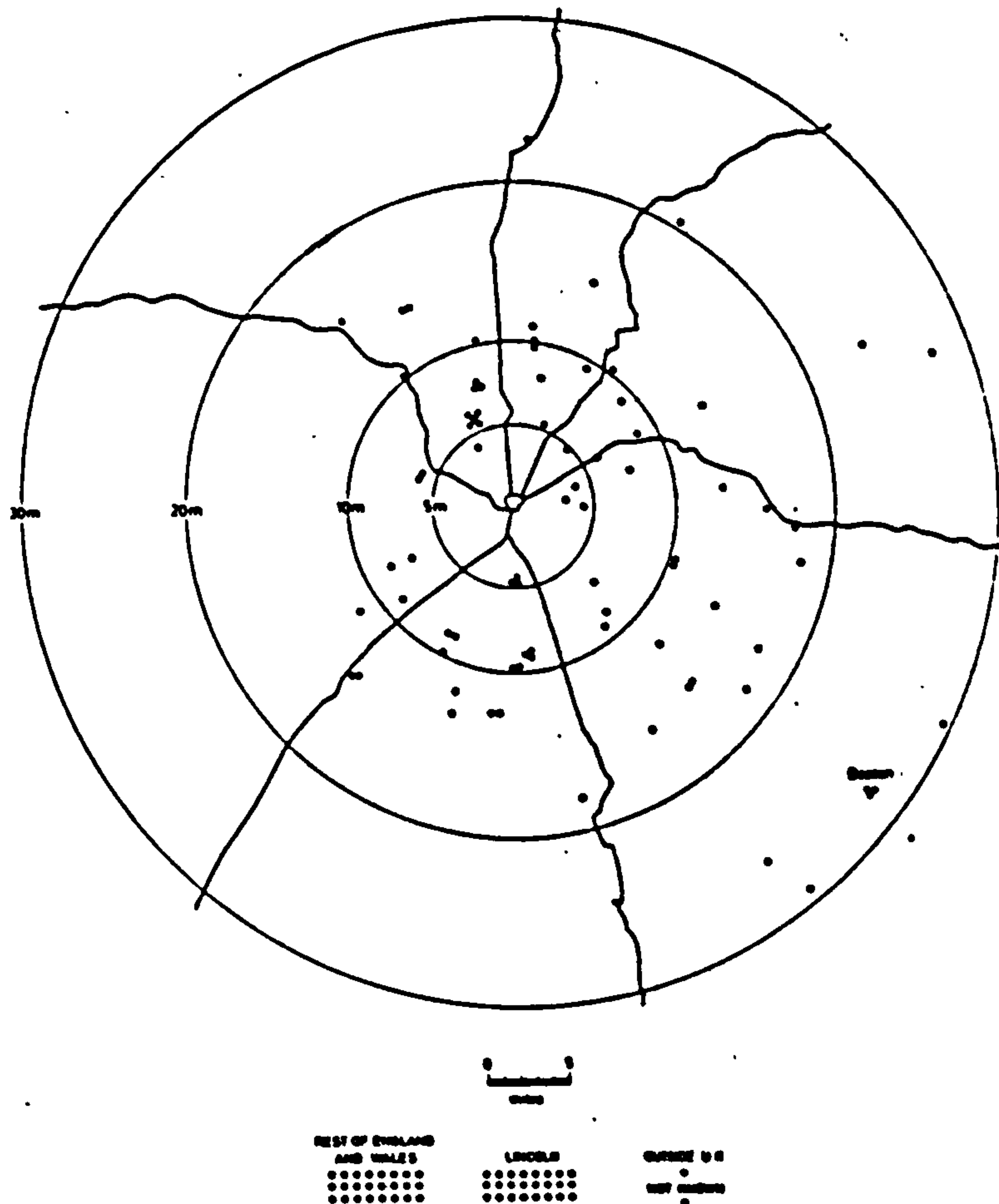


Figure 3.14

Birthplaces of servants in private households resident in Lincoln, 1871.

Source: reproduced from Ebery and Preston (1976), p.82.

TABLE 3.5 MALE FARM EMPLOYEES AND EMPLOYERS OF BOTH SEXES,
AGED 10 AND ABOVE, LINCOLNSHIRE REGISTRATION COUNTY,
1851-1901

	Farmers and -Graziers (both sexes) (a)	Agricultural labourers, farm servants, shepherds (Males) (b)	Employees per farm (b/a)
1851	11048	50556	4.6
1861	11112	52662	4.7
1871	11788	47175	4.0
1881	10048	43507	4.3
1891	9939	41961	4.2
1901	11784	36077	3.1

Source: Census Reports, 1851-1901

- Notes: 1) 1901 figures are estimates. Occupations were given by Registration County until 1891, but by 'Administrative County' in 1901. The 1901 figure has therefore been reduced by the amount by which the population of the Registration County fell short of that of the 'Administrative County'.
- 2) In 1901 the retired were enumerated separately, by previous occupation. These have been added to bring the 1901 figure into line with earlier years.
- 3) The number of farm employees may be slightly underestimated in 1901, as it appears that farm foremen were excluded from the figures unlike in the earlier censuses.
- 4) The 1881 census failed to state the number of farm workers under 10 years old. A small adjustment has therefore been made to this figure based on the proportion so aged in the previous censuses.
- 5) Female farm employees were excluded as enumeration was inconsistent from census to census, and before 1871 the figures included farmers' wives.

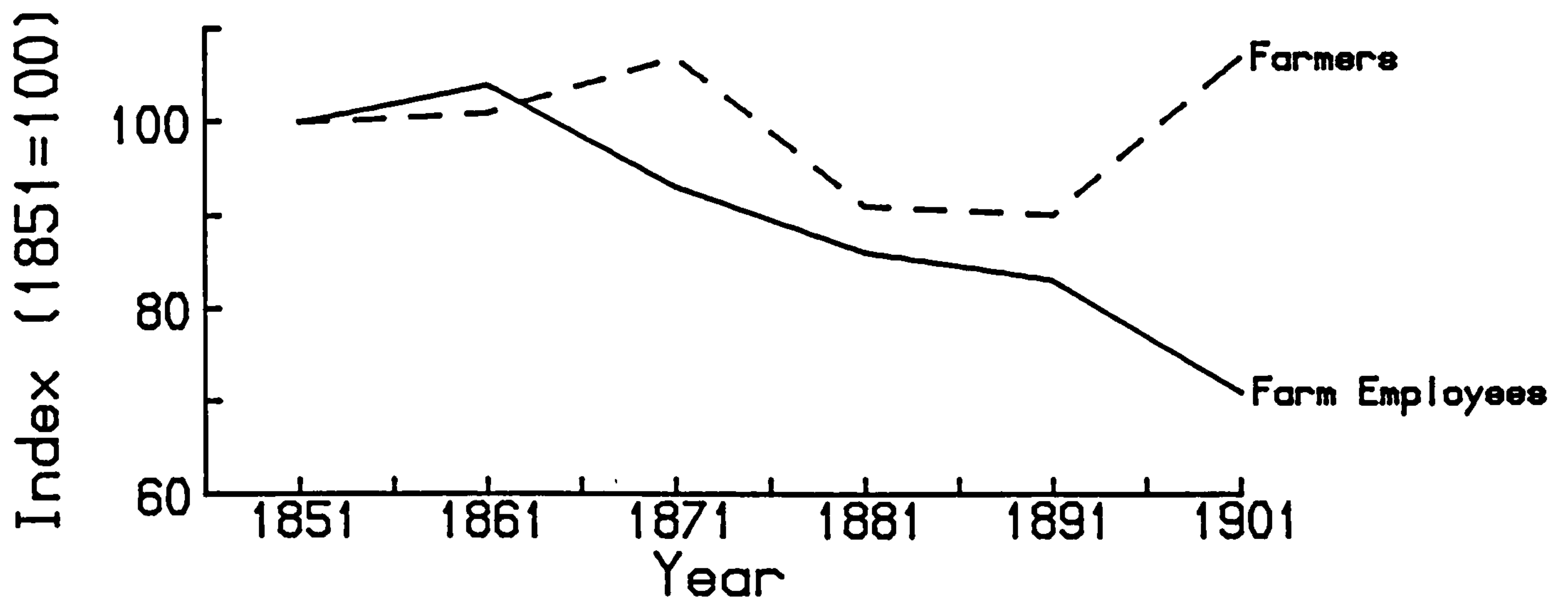


Figure 3.15

Farmers (both sexes) and farm workers (males),
Lincolnshire 1851-1901.

Source: Census Reports, 1851-1901.

TABLE 3.6 AGE-STRUCTURE OF MALE FARM WORKERS IN LINCOLNSHIRE,
1851-1901 (%)

(a) Agricultural labourers (outdoor)

	<u>Age</u>			<u>Total</u>	(N)
	<u>5-19</u>	<u>20-44</u>	<u>>= 45</u>		
1851	17.2	51.0	31.8	100.0	(39125)
1861	18.0	48.2	33.8	100.0	(41355)
1871	19.4	45.0	35.6	100.0	(37169)

(b) Agricultural labourers and indoor farm servants, aged 10 and above

	<u>Age</u>			<u>Total</u>	(N)
	<u>10-19</u>	<u>20-44</u>	<u>>= 45</u>		
1851	24.9	49.5	25.6	100.0	(49871)
1861	25.7	46.6	27.8	100.1	(51033)
1871	27.1	43.4	29.5	100.0	(45628)
1901	26.1	43.8	30.2	100.1	(35069)

Source: Census Reports, 1851-1871 and 1901

- Notes:
- 1) All figures refer to the Registration County, except those for 1901, which refer to the Administrative County.
 - 2) The 1901 figures exclude farm foremen, which may slightly overestimate the relative size of the younger age groups.
 - 3) In 1901 those enumerated as pensioners, retired or paupers were classified by previous occupation as well. These have been included in this table to bring the figures into line with those from the earlier censuses.
 - 4) The 1901 census only gave figures for agricultural labourers and farm servants combined, and was restricted to those aged 10 and above.

is quite possible that a low proportion of migrants among agricultural workers reflects their greater participation in rural-urban movement: few bothered to migrate to nearby villages. And evidence on the rate of out-migration shows little difference between these two occupational groups.³² Lastly, even if farm workers did have a lower propensity to migrate, their outflow was greater in absolute terms than that of other rural workers. They were certainly the largest occupational group in most non-industrial villages.³³ Furthermore, rural-urban migration was, ceteris paribus, more socially significant for those previously engaged in agriculture: for them migration usually meant a change of occupation.

The pattern of employment within agriculture is shown in Table 3.5 and Figure 3.15. The difference between farmers and their employees is striking. The latter fell much more markedly over the period as a whole.³⁴ Furthermore, the drop in the number of farmers was confined to the period of agricultural depression, while the fall in farm workers began considerably earlier. This point is of fundamental importance in explaining the 'flight from the land', and will be explored in the next chapter.

Rural out-migration was, then, a selective phenomenon. This is evident, too, within the confines of occupational classification. It was widely believed that migration was draining villages of their more able inhabitants. For example, there were numerous complaints by farmers about the diminishing quality of their labourers, with few favourable comments.³⁵ Such grumbling must be treated with caution, as farmers were prone to hark back to a mythical 'super labourer' of past times who probably never existed.³⁶ Nevertheless, two points do stand out. First, the younger labourers who remained tended to be the 'dull and idle ones'.³⁷ Second, migration was age-selective. The very young and the old were more heavily represented within the agricultural labour force than the rest of the occupied male population.³⁸ Table 3.6 shows the situation



worsened in the period, though complaints that 'only the decrepid and aged are now willing to stick to field labour' and that 'only the old cripples remain' were clearly exaggerated.³⁹

This chapter has outlined the main characteristics of the 'flight from the land' in the period after about 1850. The following chapter explores the nature of this phenomenon more fully.

CHAPTER 4. THE NATURE OF RURAL DEPOPULATION

Greenwood and Thomas have described Victorian migration in the following terms:

The forces that induced such moves were likely in large part to have consisted of the "push" of lack of employment opportunities and relatively low income and/or wage levels in the agricultural sector and of the "pull" of employment opportunities and relatively high income and/or wage levels in the non-agricultural sector'.¹

They go on to say that 'nonmonetary factors' also played a part, but primary emphasis is placed upon stark economic factors.² This is typical of most writing on the subject.³ E.H. Hunt has conceded that 'in a substantial minority of cases the prime reason for moving was neither employment nor higher wages' but considers that 'movements not predominantly motivated by economic considerations tended to cancel each other out' and so

'the statistics of net-migration, the visible part of a far greater turbulence, reflect fairly well the mainstreams of movement in search of work and higher wages'.⁴

At the structural level this is obviously true. Yet on turning to the evidence itself the most striking point to emerge is the inadequacy of such an interpretation at the more subjective, individual level. This chapter illustrates this point in two ways. First, by exploring a selection of material 'push' factors at work in the Victorian countryside which have been held to have 'caused' the rural exodus. These are shown to be, at best, but partial explanations. Second, the views of contemporary observers are examined. A clear contrast emerges between this testimony and more recent interpretations. It is suggested that greater emphasis needs to be given to the perceptions of those involved. The remainder of the chapter explores the foundations of those attitudes in both the changes and the continuities of rural existence in this period.

1. The Agricultural Depression in Lincolnshire

The depression in agriculture of the last quarter of the nineteenth century helped sustain a high level of rural out-migration.⁵ But it was not the sole cause. First, it has already been shown that in many rural communities absolute decline substantially pre-dated depression and occurred in the so-called 'Golden Age' of English farming.⁶ Second, a closer examination of the character of the depression in Lincolnshire undermines any simple 'depression-depopulation' framework.⁷

The first half of the nineteenth century witnessed an agricultural revolution in Lincolnshire. Arable acreage increased substantially, turning the county from a pastoral to a 'mixed' farming region. New farming methods were introduced. Barren areas like the Wolds and the Fens were transformed into prime arable land.⁸ A sharp depression then occurred between 1846 and 1852, but thereafter the county entered upon a period of peak 'High Farming' prosperity which lasted until the 1870s.⁹ By the 1860s Lincolnshire was the leading wheat-producer in the country¹⁰, and had become a renowned agricultural county. Yet at the same time the rural population began its absolute decline. As farmers strove for higher output, and despite raising wages, the supply of labour began to fall. 'Scarcely a week passes', wrote the Land Agent for the Monson estates in 1875, 'without either Mr. Brown, or Mr. Evens or some other tenant in Burton or Carlton telling me that they are coming to a standstill for want of labourers'.¹¹ The labour shortage was acute enough to counter the decline in the involvement of women and children in agriculture, especially at harvest time¹², and the 'gang system' described

below was similarly a response to labour scarcity. It was this strong market position which lay behind the rural unionism of the early 1870s (see below): 'Labourers being so scarce I dare not let him go' wrote one Lincolnshire farmer when an employee demanded a wage rise in 1872.¹³

From 1875 through to 1882 the country experienced a run of wet seasons which hit the arable districts severely.¹⁴ Things became really bad in 1879, 'a year which most farmers agree was the most disastrous they ever experienced'.¹⁵ At the same time the agrarian economy was fundamentally undermined by increased imports of grain which led to a fall in prices: by 1878 60% of British wheat was imported.¹⁶ The 'Great Depression' lasted until well into the 1890s. In Lincolnshire it resulted in a movement away from wheat to barley and oats and in a shift back to pastoral farming. The amount of permanent pasture in the county increased 19% between 1875 and 1900, rather less than the national rise of 25%. Falling wool prices and a bad outbreak of sheep rot between 1879 and 1882 caused a severe drop in the number of sheep. The decline was countered by an increase in cattle between 1875 and 1900 of 23%, predominantly for meat production; dairying never grew in Lincolnshire except for domestic consumption, apparently because of the absence of a large urban market nearby.¹⁷ Another important response to depression in the county was increased horticultural output. Potatoes became a particularly important crop, their acreage rising by 58% between 1875 and 1900.¹⁸

But these general developments conceal marked intra-county variations. Lincolnshire possessed a very diverse agriculture. Broadly speaking, there are three physical regions within the county: the uplands, the lowlands and the clays.¹⁹ These are shown in Figure 4.1. Individual regions coped with depression in their own way, depending on the nature of their soils, their agricultural development hitherto, and on the local pattern of landholding. For

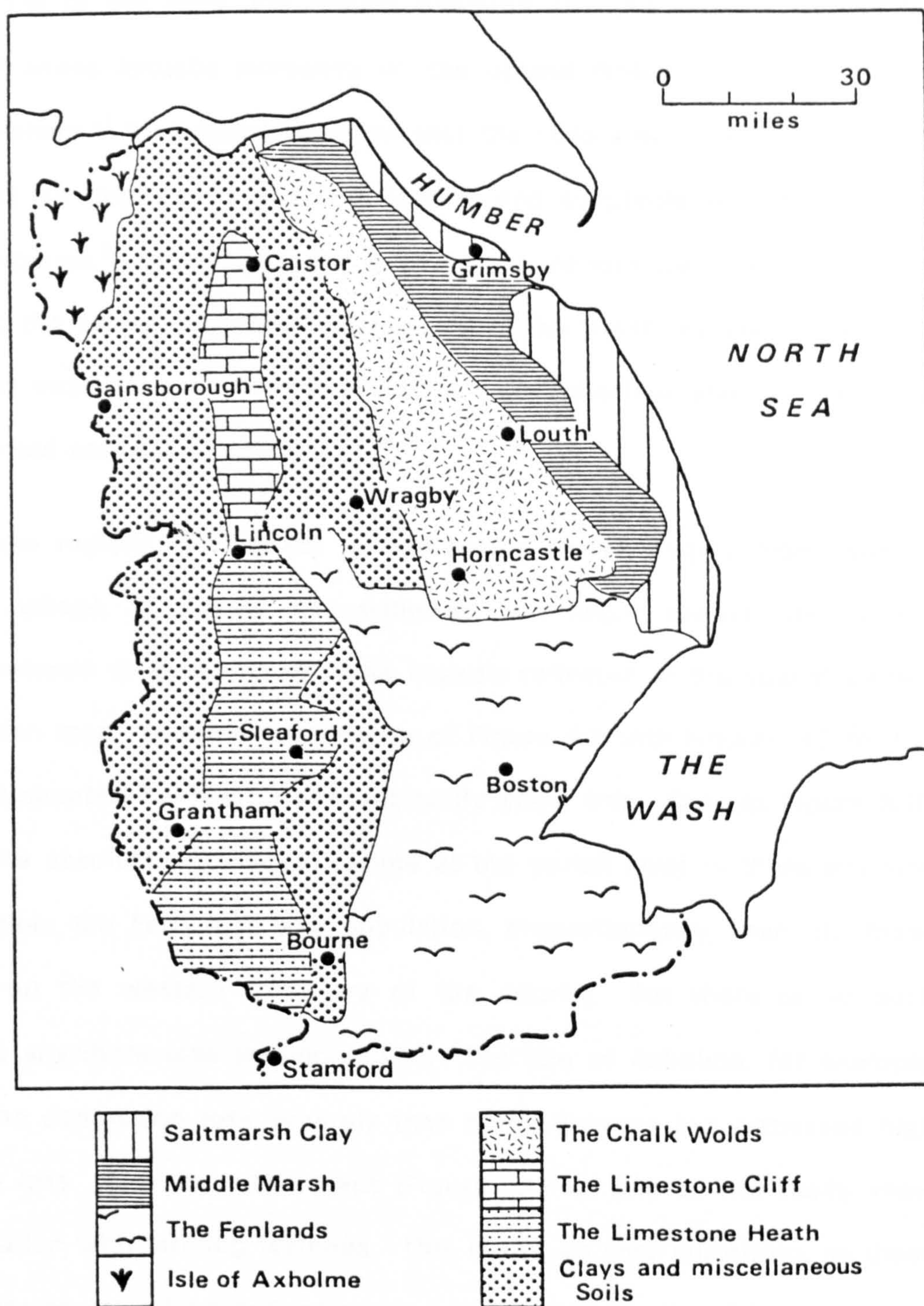


Figure 4.1

Farming regions of Lincolnshire.

Source: reproduced from Beastall (1978), p.2, with alterations.

could boast farms as vast as 2500 acres, while lowland areas were dominated by small farms (Table 4.1). The Isle of Axholme, for example, teemed with small freeholders who cultivated their plots using family labour. Most of these holdings were under 5 acres and could scarcely be termed 'farms' in the usual sense.²⁶

While it appears that the lowland regions coped best with the changing circumstances of the depression, contemporary opinion was, paradoxically, unanimous that it was the small farmers who dominated such districts who were hardest hit. These small freeholders

'had nothing to fall back upon, nor was their credit good enough to enable them to borrow money to tide over their difficulties. Living as most of them appeared to do from hand to mouth, and depending solely upon the crops of the current year to pay that year's expenses, when their crops failed, as they had in 1879 and 1880, they were unable to meet their expenses, and so were placed in a very serious plight, and had to trust to the forbearance of their creditors, mortgagees, and others to keep on to their holdings'.²⁷

And one witness commented

'It is pitiable to see the shifts many of them are put to in order to hold their little homes together'.²⁸

These men were particularly badly hit in the crisis of 1879-82, and theirs was still the worst position in the 1880s.²⁹ This hardship certainly seems to have resulted in many small farmers leaving the land:

'A number of this class were the first to go when the bad times began'.³⁰

If the individual farmers themselves did not leave, their children certainly did.

One small owner in the Spalding district in the 1890s testified that

'I and my three grown-up sons work the land, and we work as hard as slaves. My sons at home grumble sometimes at getting little pay. I keep them and they have a beast in lieu

TABLE 4.1 LINCOLNSHIRE FARM SIZES, 1870 (%)

	<u>Region</u>				
	<u>Isle of</u>	<u>Fens</u>	<u>Marsh</u>	<u>Clays and</u>	<u>Uplands</u>
	<u>Axholme</u>			<u>Misc. soils</u>	
	5	24	20		42
	parishes	parishes	parishes		parishes
<5	41.1	24.7	24.0	26.5	23.3
5 - 19	30.2	33.1	37.8	29.4	25.8
20 - 49	14.7	18.8	18.7	13.7	10.1
50 - 99	7.5	11.0	9.4	11.0	11.1
>= 100	6.5	12.4	10.1	19.3	29.6
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>99.9</u>	<u>99.9</u>
(N)	(964)	(2619)	(1218)	(1411)	(720)

Source: Thirsk (1957), pp. 216, 242, 298.

- Notes: 1) The figures have apparently been derived from the manuscript Agricultural Returns for selected Lincolnshire parishes.
- 2) Thirsk (1957) does not provide the number of parishes used in the 'clay and miscellaneous soils' category.

of wages. I have a son at Bass's brewery who is better off than any of us, and has already saved 100 pounds and is married³¹,

while another from Holbeach Fens commented bitterly:

'I brought up a family and nearly worked them to death. They said, "Father, we are not going to stop here and be worked to death for nothing", so they went off and left me and the old woman to struggle along. When they were here they got no wages, and now they're ladies and gentlemen'.³²

A contradiction is evident, then, between the testimony concerning the regional impact of depression and that concerning the plight of many individual small farmers. Depression is clearly but a partial explanation of rural population loss.

This is shown most strikingly by the experience of agricultural labour in the depression years. Agricultural labourers were probably the largest group of occupied males in the rural exodus. Yet we have seen that many labourers probably left the land well before the depression set in. We can now add to this the contemporary verdict that, of all groups, the labourers were the least adversely affected.

The testimony of such jaundiced witnesses as farmers and agriculturalists must of course be treated with caution. Nevertheless, the unanimity of such opinion is surely significant. 'The labourer is far better off than the peasant proprietor at the present moment'; 'at present the person best off in Lincolnshire connected with agriculture is the labourer'; 'How has the labourer got on during this time? - He has had the best time of it, and no mistake about it'; 'the labourers have suffered very little indeed, in fact, hardly at all'.³³

This was in the early 1880s. Thirteen years later, a group of farm labourers in the Louth area agreed that they had 'never been so well off before', and the sentiment was echoed in a study of the Isle of Axholme.³⁴ Real wages in agriculture rose by 25-30% in the last 30 years of the century, though this

improvement was bettered by many other occupational groups.³⁵

In general, depression probably reduced the demand for labour. Farmers strove to keep costs low, and the shift towards pasture meant that fewer hands were needed over the year as a whole.³⁶ The situation was exacerbated by the comparatively high marital fertility of farm labourers at this time.³⁷ Potentially, this spelt disaster for the farmworker and his family. Yet except in some notorious 'open' parishes (see below), there is no evidence of any widespread rural unemployment in these years. Reports do exist of labour meeting or even exceeding requirements³⁸, but in general the labour shortage of the 'High Farming' era continued into the years of depression³⁹:

'The exodus has certainly improved the position of those left behind; they are better appreciated as being much wanted upon the land; have full employment, and better wages'.⁴⁰

The increased use of machinery must be seen in this context. As the home of major agricultural engineering firms, Lincolnshire was probably one of the leading counties in the use of new technology.⁴¹ Even farmers of limited means could rent machinery from one of the many 'agricultural machine owners' listed in contemporary directories.⁴² But rather than being the cause of depopulation, mechanisation seems to have been a response to the diminishing labour supply⁴³:

'What a kind Providence! As work increases and labour becomes scarcer, machinery develops and more widely adapts itself as a substitutionary power'

wrote one Wolds farmer in 1872⁴⁴, while a Fenland farmer declared in the 1890s that

'We have had to use machinery instead of labour, and we do not find it has been so economical as employing good labour'.⁴⁵

E.J.T. Collins has seen the increased amount of rural out-migration and the shrinking agricultural labour force as a major cause of the almost universal displacement of the hand-flail by the threshing machine between 1850 and 1880.⁴⁶ Interpretations of rural depopulation which stress the fall in the demand for labour brought about by machines and the depression⁴⁷ thus seem flawed.

All this does not mean labourers did not suffer during the depression. Nor does it mean that depression was not an important cause of rural depopulation. Jobs and wages were reduced in the mid 1870s and 1880s, before rising again.⁴⁸ The decline in seasonal work through legislation on child employment and the introduction of harvesting machines must have hit many labourers' families hard. Nevertheless, as far as agriculture is concerned the evidence presented above strongly suggests that migration from rural areas in the second half of the nineteenth century cannot be seen in purely 'economic' terms.

2. Land

Another supposed cause of rural depopulation which had much contemporary currency was the detachment of the labourer from the land. If only he could be given a small stake in the parish, he and his family would surely stay. This was the philosophy behind the movement for smallholdings and allotments in the late nineteenth century. These were created in many Lincolnshire parishes through the patronage of philanthropic landowners or the statutory powers of the county councils from the 1880s onwards. The effects were minimal. Allotment-holders were scarcely more likely to remain in the parish than were those without allotments. In many places the supply

of allotments exceeded demand.⁴⁹ All this suggests the supposed land shortage was of little importance in causing depopulation.

Unfortunately, there is very little hard evidence of changes in the distribution of farm sizes in this period. In particular, nothing is known about the numerous small plots of five acres or less: few of these owners/occupiers submitted an acreage return in the census. Table 4.2 contains that information which does exist. In the mid-Victorian years, at least, the supposed consolidation of farmland into larger units appears unsubstantiated.⁵⁰ And if such a movement did take place, perhaps later in the century, it may well have been to the farm worker's advantage as far as employment opportunities were concerned: large farms employed more hired workers per acre than did small farms.⁵¹ In the Louth district in the 1890s it was reported that

'the position of a larger proportion of agricultural labourers is comfortable and assured where farms are large than where they are small'.⁵²

3. Rural Housing

The rural housing situation was also a potential cause of out-migration.⁵³ Two related issues arise here, namely the quality and the supply of housing. The quality of rural housing appears to have been particularly bad in Lincolnshire well into the second half of the nineteenth century.⁵⁴ Yet it seems doubtful whether a dilapidated cottage was a sufficient cause for a move:

'There are extremely few exceptions to the rule that agricultural labourers never leave a place because of a bad house, never go to one for the sake of a good one'

TABLE 4.2 FARM SIZES IN LINCOLNSHIRE, 1851-1880 (%)

(a) From published census data, excluding holdings under 5 acres

<u>Acreage</u>	<u>Year</u>		
	<u>1851</u>	<u>1861</u>	<u>1871</u>
5 - 19	23.9	18.5	25.9
20 - 49	21.0	22.0	21.2
50 - 99	17.1	17.8	15.3
100 - 299	26.5	27.4	23.8
300 - 499	7.5	9.2	8.4
500 - 999	3.5	4.4	4.7
>= 1000	0.6	0.7	0.6
	<u>100.1</u>	<u>100.0</u>	<u>99.9</u>
(N)	(10452)	(8596)	(9417)

(b) From agricultural returns

<u>Acreage</u>	<u>Year</u>	
	<u>1875</u>	<u>1880</u>
<50	76.3	75.8
50 - 99	8.3	8.4
100 - 299	10.6	11.1
300 - 499	3.1	3.1
500 - 999	1.5	1.4
>= 1000	0.1	0.1
	<u>99.9</u>	<u>99.9</u>
(N)	(26542)	(25990)

Source: Census Reports, 1851, 1861 and 1871; S.B.L. Druce, Second Report on Lincolnshire. Royal Commission on the Depressed Condition of the Agricultural Interests, PP 1882 XV, p.51.

- Notes:
- 1) The figures derived from the agricultural returns do not allow a breakdown of farms below 50 acres.
 - 2) Holdings under 5 acres are excluded from the census figures as there was massive under-enumeration of these holdings.
 - 3) No figures were given in censuses after 1871
 - 4) The huge discrepancies between the number of cases in the two sections of the Table reflect the widespread under enumeration of farm acreage in the census. See C. Thomas (1971), p. 407 (Table 7).

wrote Anderson Graham in the 1890s.⁵⁵ Contemporaries placed more emphasis on the pernicious effects of shortages in the supply of houses. One official investigation into Lincolnshire in the 1860s saw the 'destruction of cottages' as the main cause of population loss.⁵⁶ This explanation, if valid at all, applies to the third quarter of the century rather than later, when depopulation had itself eased the pressure on housing.⁵⁷

The shortage of housing was blamed mainly on the system of 'open' and 'closed' parishes. Under both the old and new (post-1834) Poor Law a parish was responsible for the welfare of its own paupers. With rapid population growth came rising poor rates. In 'closed' parishes dominated by one or a few large landowners the labouring population could be kept to a minimum by deliberately restricting the supply of cottages. This reduced the number of potential paupers, and thus the poor rate paid by the farmers and other tenants. The displaced population was forced to congregate in large 'open' or 'freehold' parishes where the land was divided between a multitude of small owners.⁵⁸ So

'In the close villages the scene is beautiful but unreal;
without its open neighbour it could not exist'.⁵⁹

This is well illustrated within the farm workforce. In many closed parishes the bulk of the labourers were annually-hired farm servants, 'confined men' living on the farm. This skeleton staff was supplemented as necessary by more casually-employed day labourers who walked in from the nearest open parishes. On the Wolds, for example, notorious open parishes like Binbrooke and Ludford supplied labour to many closed parishes on the Yarborough and other estates.⁶⁰ The phenomenon excited much official interest and opprobrium for its supposedly detrimental effect on both the housing supply and public morals. Overcrowding⁶¹ and lawlessness⁶² were the hallmarks of an open parish. Closed parishes had a more conservative and

deferential social tone.⁶³ It is usually assumed that the dichotomy disappeared with the 1865 Union Chargeability Act, which shifted responsibility for maintaining the poor from the individual parish to the wider Union. But although the initial justification for the system was removed its legacy remained, and the two types of parish were just as evident in the 1890s.⁶⁴

The implications of the system for rural depopulation are not clear. Much of the rural population was clearly forced out of the closed parishes into towns and the open parishes. To this extent, the system did encourage depopulation, but this mainly occurred before the second half of the century. Moreover, it is uncertain whether the subsequent overcrowding in poor accommodation in the 'open' parishes also forced people out of the countryside. Table 4.3 and Figure 4.2 crudely group the 606 rural communities described in the last chapter into four types: 'more' or 'less' open and 'more' or 'less' closed (information could not be obtained on two of the 606 communities).⁶⁵ The open villages clearly absorbed the bulk of the population growth in the first half of the century, though only among the smaller communities did they suffer the greater relative losses of the second. The occasional contemporary comment suggests that open parishes possessed a more volatile population turnover than did the closed parishes. In the latter

'Work is plentiful and certain, and the wages high, and the labourers having this are not inclined to leave the place,'

while in the open parishes

'Many of the men get irregular and uncertain work. Their employers take little or no interest in them or their families. The men themselves have no feeling for the place and are ready to leave it any day; they are always in an unsettled state, living from hand to mouth...'.⁶⁶

On the other hand, in a selection of Fen parishes in the 1871 census the

TABLE 4.3 CHANGES IN MEAN POPULATION OF 'OPEN' AND 'CLOSED' SETTLEMENT CATEGORIES, BY 1851 POPULATION, 606 LINCOLNSHIRE RURAL COMMUNITIES, 1801-1901.

<u>Village Type</u> (with number of communities)	<u>% RISE</u> <u>1801/11-1851/61</u>	<u>% DECLINE</u> <u>1851/61-1891/1901</u>
<u>1851 population under 200</u>		
'More Closed' (99)	37.3	4.5
'Less Closed' (104)	42.7	5.3
'Less Open' (21)	39.8	2.7
'More Open' (5)	47.3	31.6
<u>1851 population 200-399</u>		
'More Closed' (21)	48.6	3.0
'Less Closed' (59)	54.0	14.1
'Less Open' (52)	65.2	6.7
'More Open' (21)	63.3	15.3
<u>1851 population 400-599</u>		
'More Closed' (5)	64.3	20.5
'Less Closed' (24)	68.5	18.3
'Less Open' (52)	79.2	15.3
'More Open' (17)	77.2	19.2
<u>1851 population \geq 600</u>		
'More Closed' (5)	38.6	18.1
'Less Closed' (13)	72.9	15.0
'Less Open' (43)	78.6	15.9
'More Open' (63)	84.0	9.5
<u>All communities</u>		
'More Closed' (130)	42.5	7.6
'Less Closed' (200)	57.2	13.0
'Less Open' (168)	74.8	13.7
'More Open' (106)	81.3	11.0

Source: Census Reports, 1851, 1861, 1901 ; White (1882);
Wilson (1875).

- Notes: 1) See text for a definition of the four settlement types, and note 65 for their precise categorisation.
- 2) Information was not available for two of the 606 communities.

Median Population

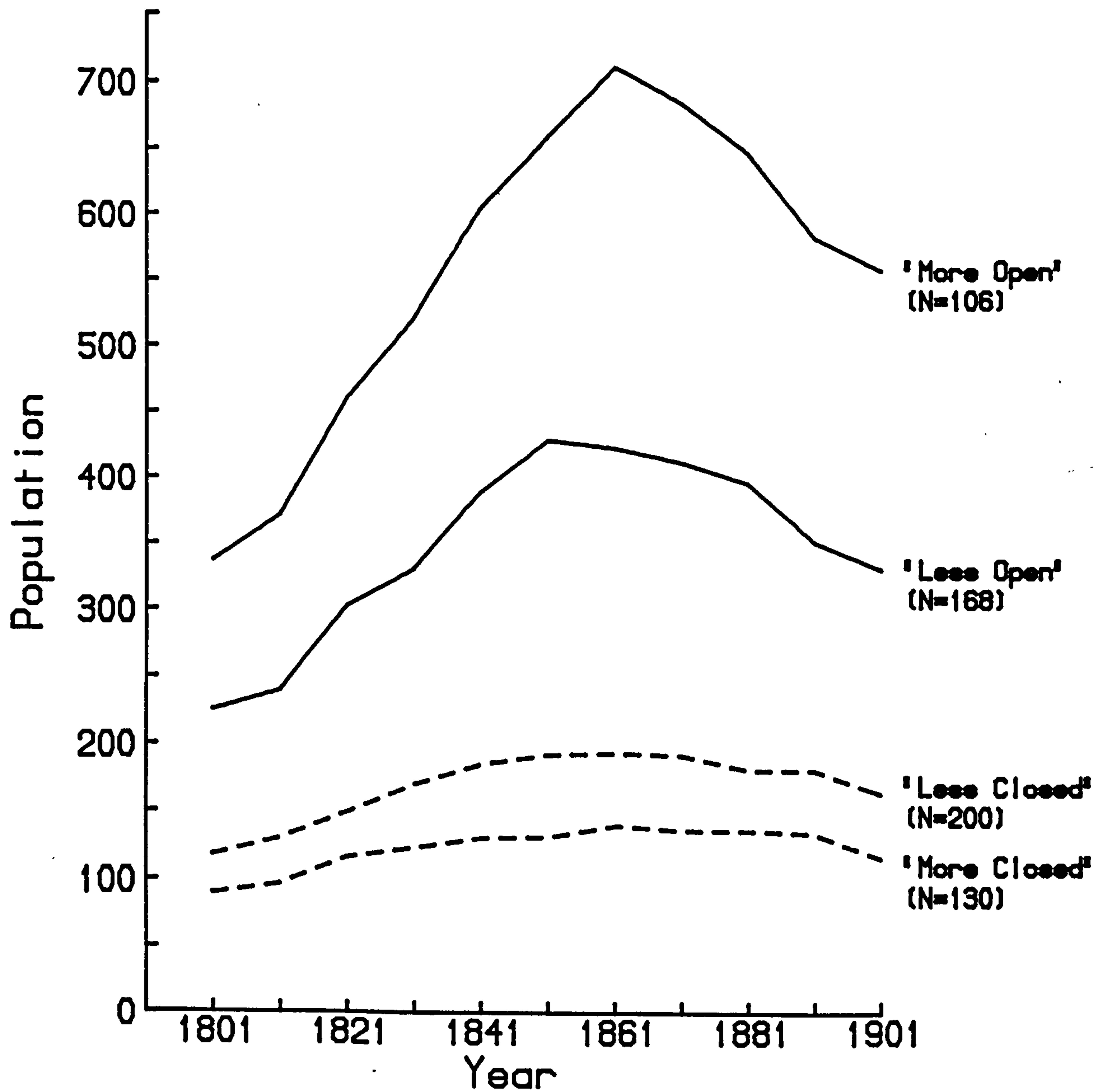


Figure 4.2

Population trends in 'open' and 'closed' rural communities, Lincolnshire 1801-1901.

Source: Census Reports, 1851-1901; White (1882); Wilson (1875).
(See text for definition of the four categories).

TABLE 4.4 BIRTHPLACE OF INHABITANTS OF SELECTED 'OPEN' AND 'CLOSED' RURAL COMMUNITIES, LINCOLNSHIRE 1851
EXCEPT WHERE STATED.

	<u>Non-natives (%)</u>	<u>(N)</u>
<u>'Open' communities</u>		
Barnetby le Wold	58.5	(845)
Binbrook	51.7	(1241)
Heckington, 1871	45.0	(1842)
Ropsley	36.0	(686)
S. Rauceby	46.3	(367)
Tetney	42.6	(869)
Winteringham	40.3	(824)
Total	46.2	(6674)
<u>'Closed' communities</u>		
Irnham	37.9	(349)
Kirmington	54.6	(379)
Kirmond	79.0	(62)
Melton Ross	66.7	(159)
N. Rauceby	50.9	(277)
Nettleton	59.4	(523)
Stainton	64.6	(144)
Swinhope	58.6	(128)
Welby	38.5	(468)
Wold Newton	54.9	(179)
Total	52.2	(2668)

Sources: Barnetby le Wold W.E.A. (1984), p.100; Heckington Village Trust (c. 1979), p.3; Mills (1984), p.2; Nettleton W.E.A. (1980), p.40; Olney (1975), p.36; Rogers (1969), p.12; Steel (1979), p. 168; Winteringham Local History Group (1980), p. 109. Communities were categorised by information within these cited works and by reference to White (1856).

Notes: 1) For open/closed categorisation, see footnote 65.

2) Only local studies of communities without extraordinary in-migration (railway navvies, iron miners etc) were used.

open parishes had as high a proportion of native-born inhabitants as did the closed. This was probably the result of inheritance among small freeholders.⁶⁷ Richard Olney has gone further and ventured that open villages probably had a higher proportion of native-born as the greater availability of cottages helped produce a more stable population.⁶⁸ Table 4.4 is based upon a selection of local studies of the 1851 census (the most widely investigated census) and tends to confirm this view. However, it also reveals much variation from place to place, and takes no account of the age structure of the populations involved. On balance, it cannot be said to discredit the contemporary comments. Moreover, the whole system of open/closed was conducive to rural mobility, as will be mentioned below.

To cast some further light on some of the factors discussed so far, plus some other potentially important influences, a multivariate analysis was undertaken using the very limited published information available at village level. The exercise and results are fully explained in Appendix C. In general, the open/closed variable was of limited importance in determining a community's relative population loss though there is a suggestion that closed communities lost relatively fewer inhabitants than did their open counterparts. Overcrowding appears to have been similarly unimportant though not always insignificant. More potent influences would appear to be sexual imbalance (a lack of eligible marriage partners?), population size (small places suffered greater proportionate losses) and distance from an urban destination (a very important factor). However, the exercise was so crude and based on so few of the many potential variables that these results are only suggestive. In general, the models accounted for a small portion of the total variation (between 15% and 24%).

* * * * *

Material 'push' factors, then, were only partially responsible for the flight from the land. A great many moves were inspired more by attractions elsewhere. Writing on those who left the Lake District in the same period, Marshall and Walton have observed that 'their motivations were hardly very complex; they were...in search of better things'.⁶⁹ These 'better things' undoubtedly had a powerful economic component. The towns could offer higher wages and better job opportunities than the land ; there was widespread rural poverty.⁷⁰ Yet on reading through the reports of the time one is struck over and over again by the low importance accorded such reasons.⁷¹ Modern scholars give them more weight than did contemporary commentators. In neighbouring Yorkshire, for example, it was reported that agricultural labourers moved to the towns 'above all things' to be 'more in the stream of life'.⁷² One Land Agent for estates in Nottinghamshire and Lincolnshire in the 1890s 'enquired of each 'young fellow' who left his reasons for migrating. Wages were but a minor consideration. Rather,

'The attractions of the town and the greater amount of incident and life that they see will always tell in favour of the town'.⁷³

At the same time in the Louth district

'The young men flock to the towns attracted, as some say, by the better wages, but more by the idea that town life is less monotonous'.⁷⁴

And to the south in the Fens men were leaving for the railways, the police or 'go to the towns for gaiety'.⁷⁵ 'They do not desert agriculture because it does not give them the comforts or luxuries they require,' wrote Kebbel, 'but because it does not give them the excitement'.⁷⁶ There was a new feeling of restlessness and dissatisfaction in the air. Henry Winn noticed it in Fulletby: 'the spirit of the age is so restless and discontented' while 'the quiet plodding life of the village so monotonous'.⁷⁷ A government investigator in the 1890s

wrote of 'the restlessness which now pervades the young people'.⁷⁸ In the Louth district young men were reported 'little disposed to bind themselves for a year':

'It is a curious fact, and one hardly to be explained except by the general feeling of restlessness and unwillingness to face the idea of being bound to steady work, even for a year, that very many men, while admitting the great advantages of being confined men, stated that they would nevertheless rather be day labourers'.⁷⁹

Countless farmers bemoaned the lack of interest in farm work among their labourers.⁸⁰ Women were just as affected:

'the poetry of honest labour and the charms of home life seem to be no longer an object of a girl's ambition'.⁸¹

All this is a far cry from the picture painted in recent surveys by E.H. Hunt and G.E. Mingay which stress the reluctance of farm labourers to migrate and the handicaps they faced as potential movers.⁸² Rather, migration seems to have captured the imaginations of many Lincolnshire country-dwellers in the second half of the nineteenth century. I would suggest that this was something rather new, and perhaps distinguishes the period from those before when rural-urban movement was more exclusively the outcome of material considerations.⁸³

* * * * *

A whole range of developments combined to bring this about. For one thing, the period witnessed a marked change in attitudes which seems to have loosened traditional ties with the soil. Towards the end of the century Richard Jefferies wrote that 'The "civilization" of the town has, in fact, gone out and taken root afresh in the country'.⁸⁴ The old face-to-face world based on deference and paternalism was transformed and the Lincolnshire countryside became as class conscious as any industrial town. Gone was the

old bond between squire, tenant and labourer. The 'new farmer' was noted for his genteel manner and social pretensions: his farm servants, for example, were no longer accommodated in the farm house, but pushed into the tied cottage of the farm foreman or waggoner.⁸⁵

This class antipathy reached its zenith in the agricultural trade unionism which swept across Lincolnshire and other counties in the 1870s.⁸⁶ In this movement we can see, for the first time, the articulation among rural workers of migration as a conscious tool of betterment.

The unrest began in 1872 when local labourers' organisations sprang up all over Lincolnshire to agitate for improved hours and wages. There had been outbreaks of unrest earlier in the county, but these were mainly sporadic, disorganised, and violent protests at times of particular hardship.⁸⁷ The agitation of the 1870s was the first successful attempt to organise the farm workforce into formal trade unions, and was borne of expectancy not despair: it took place at a time when the labourers' market position was strong.⁸⁸ By the summer most of the local associations had united to form the Lincolnshire Labourers' League led by William Banks of Boston. The remainder affiliated to the rival National Agricultural Labourers Union led by Joseph Arch, the larger of the two unions nationally. Selective strikes did raise wages, but in 1874 the farmers themselves united and imposed a lockout. This put paid to militant activity, and the unions gradually lost influence and declined. At their peak in 1874 the two unions could probably boast about 14-15000 members in Lincolnshire, with about 75% in the League and the remainder in Arch's NALU. This amounted to about 35-40% of agricultural day labourers.⁸⁹

The movement is of two-fold significance for the student of migration. First, its widespread incidence and the rapidity of its growth cast doubt upon received ideas about the 'isolation' of rural life.⁹⁰ Meetings were held in many

market towns and large villages, and were regularly reported in both the county newspapers and the League's own weekly paper.⁹¹ These were well-attended, mainly by the day labourers who formed the bulk of the membership. For example, a NALU meeting in Market Rasen in April 1874 attracted between 1500 and 1600 people.⁹² Second, and most important, both unions encouraged and organised migration and, especially, emigration.⁹³ Union branches continually helped members to move to work elsewhere, especially when blacklisted by farmers for union involvement, but with the failure of the strike weapon in 1874 it was emigration that became the central tenet of policy. The League's newspaper carried emigration notices every week alongside editorial exhortations to members to make the break and go abroad. Banks was himself a salaried emigration agent. Numerous parties left Lincolnshire for Canada, Australia and New Zealand under the auspices of the two unions in the 1870s. Local open-air union meetings became dominated by the topic of emigration, and eulogies of foreign parts had a prominent part in most union officials' speeches.⁹⁴

Of course, emigration was not confined to members of the unions. County newspapers as well as the League's own paper were stuffed full of emigration notices. Many offered free or assisted passages sponsored by the colonial governments. Agents advertised, too, for farmers to go to the United States.⁹⁵ Unfortunately, official emigration figures are not available at county level, and we must rely on the crude estimates given in Table 3.2. While emigration contributed to rural population loss, it was less important than migration to the towns.⁹⁶ Nevertheless, its impression on many individual communities was surely profound. Between September 1874 and July 1875 109 people emigrated from the small market centre of Alford (population 2881 in 1871) under the auspices of the NALU; in late 1874 the villages of Binbrook, Keelby, Laceby and Ulceby each lost between 20 and 50 people in a

League-sponsored ship to New Zealand.⁹⁷

Ironically, emigration was highest in the 1880s when the unions had died out. However, the activity of the 1870s probably underpinned much of this later movement. For the real importance of unionism lies in the way it raised expectations and spread the idea of migration and emigration into so many labouring homes. From the village of Billingborough in 1875 it was reported that 'Emigration seems to be the principle topic of conversation among the labouring classes'.⁹⁸ Horizons were widened, restlessness increased. Most people could not face emigration, but many were no doubt prompted into a less drastic move, reflecting the comments of one labourer in the Epworth district after hearing a speech by William Banks:

'I am at a loss to understand why these delegates come amongst us in this double capacity of representing the Labour League and advocating emigration....Migration at home from place to place I can understand and believe, that if more resorted to would be better for the whole class of toilers. Migration does not necessarily mean breaking up a household, but emigration means this, and a good deal more'.⁹⁹

Banks was well aware of this mentality. On one occasion he wrote of his members:

'....should they not desire to go to Queensland, then there is work for 2000 or more on the Settle and Carlisle Railway, so there is no excuse for idling at home'.¹⁰⁰

The 'Revolt of the Field' increased the acceptability of the migration option. It was also an important watershed for the political and social awareness of rural workers. The agricultural unions were firmly in favour of extending the franchise to their members. This goal was realised in 1884. Agricultural labourers suddenly found themselves constituting the majority of the rural electorate, a point not lost on the two major political parties. Village society became courted in political campaigning in a way not seen before. Political

leaders developed policies designed to win the support of the rural working class, the most famous example being Chamberlain's 'Unauthorised Programme' for the 1885 General Election: 'three acres and a cow'.¹⁰¹ Such attention probably exacerbated rural depopulation:

'Hodge is petted by both political parties on account of his vote until he becomes discontented, and thinks nobody is so ill-used as himself'.¹⁰²

This growing awareness among the rural population was abetted by the growth of the county press in the second half of the century.¹⁰³ This was in turn underpinned by the increased provision of education and the spread of literacy. When education became compulsory in the 1870s numerous farmers complained of its pernicious effects. Not only did it deprive them of cheap labour for much of the year, but its content was also unsuitable. 'Why we should have to pay to teach our labourers' children to be of no use to us I cannot see' was a typical sentiment.¹⁰⁴ Henry Winn clearly believed that education was a major cause of village depopulation:

'Our old labourers were uneducated, not one in twenty could read or write, yet they were well versed in all kinds of farm work, and were fairly contented. When the children got a little education they began to look down on their parents' condition, and I have often heard boys say: "I'll never be a farmer's drudge if I can help it".....I taught a village school myself several years and nearly all the boys passing through that school were lost to agriculture. One went to London and joined the police force there, inducing his brother to go into the army. One family of four boys entered the Lincoln foundries. Two other brothers engaged in the coal trade, one or two entered into the Railway service, two settled at Horncastle and others at Grimsby and Hull'.¹⁰⁵

Surveying the national scene in the 1870s and 80s, Kebbel put this even more forcibly:

'The imagination of these lads has been stirred by what they have learned at school; and they would not give a fig for anything that their native villages can offer them. They talk of Africa and golden joys. Don't tell me that three acres and a

cow, or allotments, or small holdings would keep them back. They know well enough that with three acres, or with six, with one cow or with two, they would still be peasants; and peasants they are resolved to be no longer. That is the real secret of this so-called rural exodus. Education has filled the rising generation with new tastes and new ambitions; has suggested to them infinite possibilities in that life beyond the fields of which every newspaper tells them something, and every letter they receive from friends and relatives who have gone before paints a glowing picture'¹⁰⁶

The importance of the spread of the rural press and the introduction of the Penny Post is also obvious here.

To a limited extent education also helped to standardise manners and attitudes. Local idiosyncrasies were reduced. Lincolnshire country dwellers became less of a race apart. This is most obviously seen in the decline of regional dialect.¹⁰⁷ Contemporaries reported a growing sense of shame among youngsters towards their local tongue. This was usually attributed to schooling, and it even influenced the older village residents. Anderson Graham recalled one old Lincolnshire labourer

'who on being asked if people still said "nobbut", thereabouts replied in the negative, but a few minutes afterwards, in talking of something else said "nobbut" himself. "Why", exclaimed his interrogator, "you say 'nobbut'!" "So I do sometimes," he answered, with a look of contrition, "but I am trying not to."¹⁰⁸

The transport revolution of the Victorian years also played a major part in breaking down rural isolation.¹⁰⁹ The arrival and expansion of the railways must obviously be mentioned here. First introduced in the late 1840s, by the early twentieth century few places in the county were more than five miles from a station.¹¹⁰ There is a tendency among scholars to play down the direct importance of the railways to migration, and to stress instead their indirect role through undermining village economies and casting a spell on the popular imagination.¹¹¹ There is no way of accurately measuring their direct influence, but there is evidence to suggest that it may have been greater than

some have allowed, though few could agree with Cairncross that 'The main cause of rural depopulation was the building of the railways and the consequent revolution in transport'.¹¹² In particular, it seems that railways replaced walking and horseback as the main method of travel for journeys beyond one's immediate vicinity.¹¹³ Cornelius Stovin, a Wolds farmer and Methodist preacher, recorded visits by train to London, Manchester, Oxford and Rochdale in his diary in the 1870s. He also took the train to various Lincolnshire towns.¹¹⁴ A study of five Northamptonshire parishes found a marked rise in marriage distances following the introduction of railways.¹¹⁵

Before the railway many villages were served by carriers. These actually expanded in the railway age as a link between villages and the nearest station. The bicycle, too, must have had a major impact. 'Velocipedes' appeared in some villages in the 1870s.¹¹⁶

Along with these innovative developments there were other, more deeply-rooted aspects of rural life conducive to a high level of mobility. These can be explored in turn.

Seasonal Labour

At harvest time in arable districts the local labour force had often to be supplemented from external sources.¹¹⁷ One such source was Ireland. Beginning, it seems, in the 1820s, large numbers of Irishmen visited Lincolnshire each year for the harvest. The numbers appear to have been most pronounced in mid-century; in the later decades of the century the depression and the introduction of the self-binder combined with improved conditions in the west of Ireland (from whence most of them came) to reduce

the numbers coming over, though many were still visiting in the years before the First World War.¹¹⁸ They seem to have existed alongside their hosts without too much antagonism, living in barns and working in gangs together, and generally keeping apart from the other labourers. These men tended to visit the same farms every year, and were a regular sight in certain parts of the county, most notably the Fens. In addition to the 'true' Irish, the county was also visited by the 'English-Irish', as they were called, Irishmen who lived in Manchester, Leeds, and cities in the Midlands, as well as many seasonal English migrants, especially from Norfolk and Suffolk.¹¹⁹ On the one hand, then, a considerable portion of the rural labour force consisted of habitual migrants. On the other hand, the annual arrival of all these outsiders must have exerted a considerable influence over the imaginations of the resident population. Although the amount of seasonal migration declined in the second half of the century¹²⁰, the example of the seasonal visitors doubtless infected many rural dwellers with the desire to move.

A more abrupt intrusion was that of the railway navvies. In the Kesteven district in the 1851 census, many villages experienced very large temporary increases in population through the building of the Great Northern Railway through Grantham. From the limited research that has been done, it seems most of these men had been recruited elsewhere in England: Lincolnshire natives were in a minority and the Irish non-existent¹²¹

The Gang System, and 'Open' and 'Closed' Parishes

The 'gang system' was another form of institutionalised seasonal labour mobility, albeit on a more local scale. This seems to have begun in the second quarter of the century as a means of meeting seasonal labour

shortages in certain places by organised parties of women and children travelling from nearby towns and populous villages. Lincolnshire was one of the major locations of the system, most notably on the Wolds and, especially, the Fens. Two types of gang existed. 'Private' gangs were employed directly by the farmer and placed under the supervision of one of his own men. 'Public' gangs were employed by a Gangmaster who travelled from one farm to another, the farmer sub-contracting with the Gangmaster for the task to be done. The system attracted much attention and opprobrium, more for the immorality supposedly rife among the public gangs than the long hours of walking and work entailed. The Gang Act of 1867 restricted the worst excesses through a method of licensing, though the system survived late into the century on a reduced basis.¹²² Most gangs serviced an area up to 5 miles, though 9 or 10 miles was not unknown.¹²³

The gang system was, of course, closely bound up with that of 'open' and 'closed' parishes already described. Many large open parishes like Binbrook on the Wolds, and Winterton in the north, were gang centres. So, too, were small market towns like Caistor and Louth.¹²⁴ The large tenant farmers in the 'closed' parishes also obtained most of their regular, year-round, male day labourers from such sources. The open/closed system thus imposed irksome journeys to work on a large proportion of the labouring population – perhaps even the majority. Day after day great masses of the rural population were tramping around the countryside of Victorian Lincolnshire. The Relieving Officer of Caistor described the scene and the cause:

'Down this hill I see hundreds of labouring people pass at night, coming back from Swallow, Thoresway, Cuxwold, and so on. Some of them go four, five, or even six miles. There is a great want of cottages in the surrounding villages'.¹²⁵

The existence of 'open' and 'closed' parishes, together with the gang system, ensured that many country people were in daily contact with neighbouring

settlements and continually mingled with the inhabitants of villages other than their own. This surely helped to diminish the degree of isolation in their lives and equip them with a broader outlook.

Settlement and Removal

The initial raison d'être of the open/closed parish system was the settlement component of the poor law. Under the Union Chargeability Act of 1865 the parish was no longer obliged to support its own poor, except as part of the wider Union. Yet even before this date, it seems that the law of settlement was, in practice, a very limited hindrance to mobility.¹²⁶ Moreover, there is a sense in which violating the laws of settlement and the resulting forcible 'Removal' can be seen in themselves as an aspect of a wider system of mobility: it was this regulatory apparatus which, at least in theory, allowed redress against the worst excesses of population transfer. And a removal was, after all, a 'migration'. Surviving Removal Orders from the period 1850 up to 1865 have been examined. Very few exist for this period, as by then the impact of the settlement laws was small and declining.¹²⁷ The principal subjects of the existent Orders are shown in Table 4.5.¹²⁸ By this period it would appear that most of those involved were individuals with problems of some kind over and above that of just poverty. The restrictions to mobility of the settlement laws clearly bypassed most of the population.

TABLE 4.5 **PRINCIPAL SUBJECTS OF POOR LAW REMOVAL ORDERS,**
SELECTED LINCOLNSHIRE PARISHES, 1850-1865

<u>Apparent status</u>	<u>%</u>
Widows (with or without children, all ages) ^a	14.5
Widowers (with or without children, all ages)	1.3
Single women, pregnant or with _b children	5.0
'Deserted' wives with children	8.2
Single men, aged 70 or more	1.3
Sick men (of any familial status)	19.5
Sick women	1.9
Insane men	1.3
Insane women	0.6
Deserted/orphaned children	5.0
Sub-total	<u>58.6</u>
Married couples, with or without children	32.1
Single men aged less than 70	3.8
Single childless women, aged less than 70	5.7
Sub-total	<u>41.6</u>
Total	<u>100.2</u>

(N=159)

Source: Lincolnshire parish records, Algarkirk, Anderby, Barnetby le Wold, Belchford, Caistor, Croft, Friskney, Horbling, Huttoft, Kirton in Lindsey, Miningsby, Morton nr Bourn, Navenby, Stainfield, Stallingborough, Stapleford, Sutterton, Threckingham, Waddington, Welton by Lincoln parishes; Lincoln (Lindsey) Petty Sessions Records : Removal Orders and Settlement Examinations (LAO LNPS 1/32)

Notes: a) Including two sick and disabled widows

b) Including three wives whose husbands were in prison and one whose soldier husband was serving abroad. The remainder were described as 'deserted' or their husbands as having 'absconded'.

Farm Service

The institution of farm service might also be cited as encouraging mobility. Farms which were large, or remote, or had a pastoral content usually depended on a certain number of resident 'indoor' workers. These were known in Lincolnshire as 'confined men', and comprised foremen and shepherds along with young male and female farm servants. In contrast to day labourers, these workers were hired annually, at one of the many 'statute sessions' (hiring fairs) held in the county's market towns. Most changed masters every one or two years.¹²⁹ To some extent, then, mobility was an integral part of the system, and this aspect has been much stressed by both contemporaries and historians.¹³⁰ One landowner claimed

'that it creates a kind of vagrant population, who lose all home ties, and, as a general rule, never remain more than one year in the same place'.¹³¹

In a sample of south Lindsey parishes in the 1851 census, only 16% of farm servants aged 15-24 were resident in their native parish.¹³² Yet this mobility was constrained: these farm servants were only living a mean distance of five miles away. Similarly, a study of eighteenth century hirings at Spalding Statute Sessions found that while the statutes had a very large catchment area, the farm servants involved showed a very marked tendency to obtain new posts near to their old ones.¹³³ In addition, the number of 'indoor' farm workers declined in the second half of the nineteenth century. The census only separates the two kinds of farm worker between 1851 and 1871, in which period the number of male farm servants in the county fell by 20.9%, whereas the number of male day labourers only fell by 5.0%, and actually rose between 1851 and 1861. (The census figures for females show such wild fluctuations as to be wholly suspect). However, in 1900 hiring was more common in Lincolnshire than any other English county except Yorkshire and

those in the north.¹³⁴

In sum, service entailed movement, but actual mobility was perhaps less than it potentially could have been. Indeed, 'living in' has been seen as a means by which farmers tried to quell the outflow of labour.¹³⁵ Workers were tied to one farm for a whole year, and the annual hiring fairs do not seem to have operated in any random 'revolving door' manner. The most important element seems to have been the visit to the hiring fair itself.

Fairs and Feasts

Rural life was punctuated by fairs, from the humble village feast through the smaller statute sessions to big events like the Horncastle horse fair and the large fairs held in Grantham and Lincoln. All attracted people from deep within the countryside.¹³⁶ For most agricultural workers the annual 'statutes' were the highpoint of the year. These were exceedingly colourful affairs, as much an entertainment as a labour exchange. They attracted crowds from afar.¹³⁷ One village innkeeper commented:

'At May-day statute some 1,500 people come to Hainton. They are all farm and domestic servants, but I don't believe 50 come to be hired; the rest come for a spree...'¹³⁸

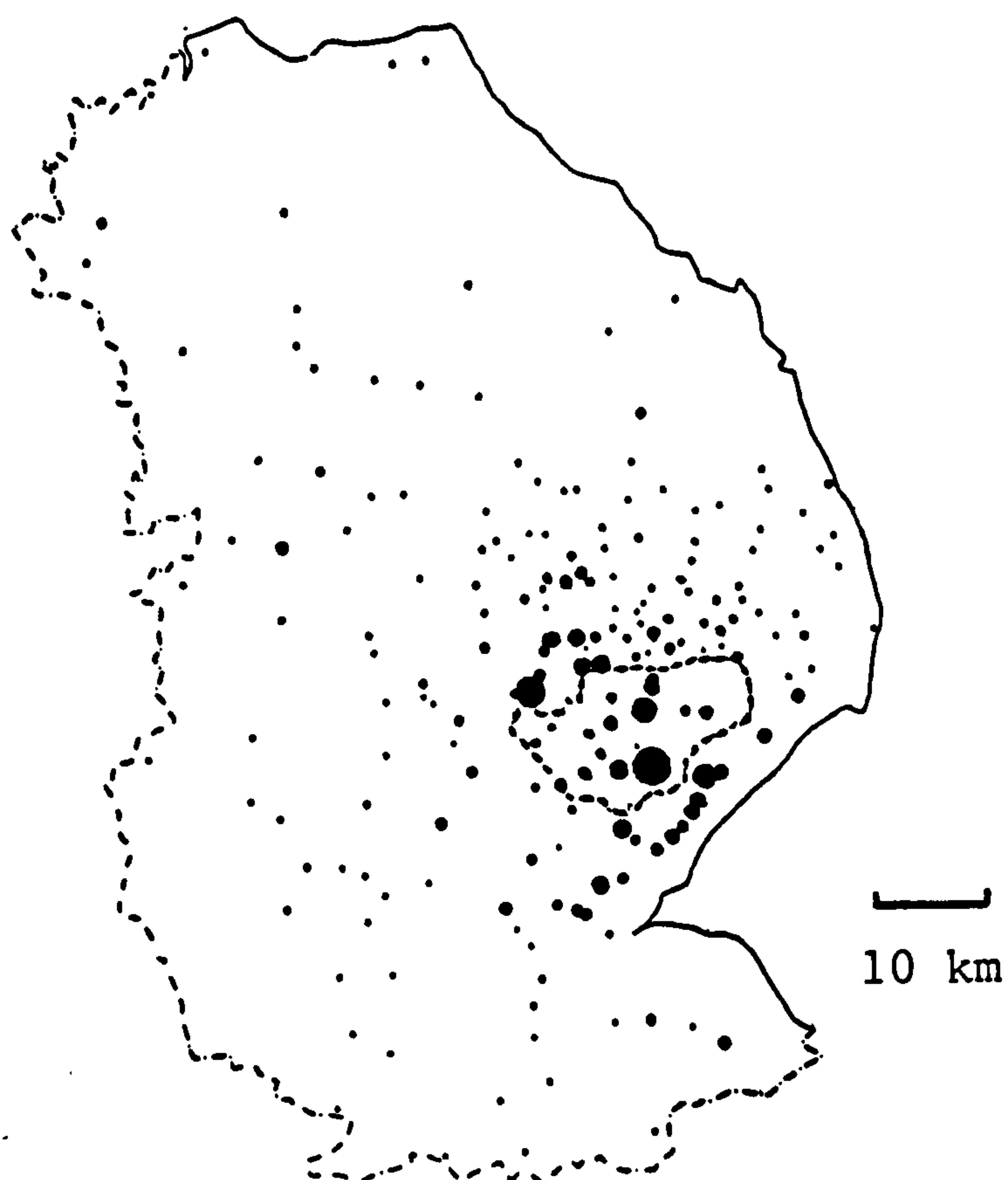
This again testifies to the mobile nature of Victorian rural life, and to the dangers of over-emphasising the 'isolation' of many village inhabitants. With the decline in 'indoor' service and the growing use of newspapers and registries for recruitment, so the numbers of hiring fairs fell. Nevertheless, they were still held in all the main towns at the end of the century.¹³⁹

* * * * *

In stressing the importance of such developments it must not be forgotten that rural life was characterised by a high level of mobility. Few still believe in the myth of the stable, traditional village community. Table 4.4 clearly supports this, and a wider study of the 1851 census has shown that rural communities contained almost as many non-natives as did urban areas.¹⁴⁰ Many parts of the Wolds and the Fens had only become inhabitable during the first part of the century, and were especially dependent on migrants.¹⁴¹ They drew population from a wide range of rural sources (Figure 4.3). Table 4.6 suggests an even higher degree of mobility among rural populations than does Table 4.4. It is based on the location of vital events in the lives of ancestors of present-day family historians, taking registration as a proxy for residence. People born (or baptised) in rural locations appear to have been even more mobile in later life than were those born in towns. This is partly an artefact of the greater availability of officiating institutions (churches and chapels) in the towns, but is unlikely to be wholly so. Furthermore, long walks to visit towns and relatives were quite normal in the Lincolnshire countryside, especially before the railway. A round trip of 40 miles in a day was not unheard of.¹⁴² Marriage regularly entailed a change of residence, especially for men.¹⁴³ Rural Lincolnshire was a mobile world. This extensive mobility was nothing new, as work on earlier centuries has shown.¹⁴⁴ Migration to urban areas must be seen, then, against a backcloth of movement within the countryside.

* * * * *

This chapter has outlined the main characteristics of population movement in Victorian Lincolnshire. It has tried to show how developments in the second half of the century combined with more entrenched aspects of rural life to encourage mobility and make the migration option rather less daunting. More fundamentally, migration can clearly be viewed at more than one level. At the



Dotted line indicates approximate boundary of Fen district studied.

Figure 4.3

Birthplaces of Lincolnshire-born household heads enumerated in Fen settlements, 1851.

Source: reproduced from G.J. Fuller (1957), p.10, with alterations.

TABLE 4.6 THE LOCATION OF VITAL EVENTS IN THE LIVES OF 18th and 19th CENTURY LINCOLNSHIRE-BORN MALE ANCESTORS OF PRESENT-DAY FAMILY HISTORIANS

<u>Apparent number of moves</u>	<u>Urban-born (%)</u>	<u>Rural-born (%)</u>
<u>Where two events are recorded:</u>		
None	55.0	27.1
One	45.0	72.9
	<hr/>	<hr/>
	100.0	100.0
	(N=20)	(N=96)
<u>Where three events are recorded:</u>		
None	23.7	16.7
One	36.8	39.6
Two	39.5	43.8
	<hr/>	<hr/>
	100.0	100.1
	(N=38)	(N=192)
<u>Where four events are recorded:</u>		
None	26.0	10.6
One	19.0	20.8
Two	30.0	40.4
Three	25.0	28.2
	<hr/>	<hr/>
	100.0	100.0
	(N=100)	(N=255)

Source: Society for Lincolnshire History and Archaeology, Family History Sub-Committee, Birth Briefs, contributed by members of the Society, volumes one (1982) and two (1984).

(Continued on next page)

TABLE 4.6 Continued

- Notes: 1) All male ancestors born in Lincolnshire in the 18th and 19th centuries were included. Each individual had information on up to four vital events recorded: birth/baptism, marriage, birth/baptism of child, and death/burial. The location of successive events is used to deduce the number of moves (including return migrations) made. Emigration overseas and movement within the country of destination are counted as ordinary moves.
- 2) There are several potential sources of bias. First, those who trace their family history are not a random sample. The current interest in the subject in North America probably results in an over-representation of emigrants and hence an overstatement of mobility. On the other hand, it is easier to trace non-mobile than mobile predecessors, especially in the pre-civil registration era.
- A bigger problem arises in using registration as a proxy for residence. This applies mainly where the information obtained is from a non-civil register. We know that many people were baptised, buried, or, especially, married in a parish other than their current residence. Yet again this is to some extent countered by the fact that much mobility will be undetected by vital information. For a thorough discussion of the problems of using registration material to infer mobility, see the articles by Souden and Snell in Local Population Studies, 33, 1984.
- 3) 'Urban' birthplaces were identified from the map in Wright (1982), p.5, though those places shown there as 'former towns' were classed as rural. No more rigorous definition could be employed because of the wide time span of the data used.

structural level, aggregate population shifts were directed away from areas of restricted economic opportunity towards areas of expansion. Thus the countryside lost people to the towns. At the micro level, however, the evidence suggests that for many rural-urban migrants the promise of work was a necessary rather than a sufficient factor. Less tangible, qualitative influences were just as important. Such considerations are neglected in much modern writing which tends to adopt an ecological approach, seeing migration purely as a mechanism by which population is balanced with available resources via the prevailing mode of production. In this perspective migration becomes the only plausible rational response to economic hardship. Other strategies, such as the reorganisation of the family economy, the re-structuring of the household (taking in lodgers, for example, or 'huddling' with relatives), or changes in nuptiality and fertility behaviour are ignored.¹⁴⁵ Yet the propensity to migrate in response to material hardship is itself variable, determined by a whole host of other macro- and micro-level considerations.¹⁴⁶ Moreover, we have seen that quite high levels of out-migration need not be accompanied by economic hardship of a 'corresponding' magnitude. Put simply, this chapter has reiterated the point that migration is better seen in terms of multiple motives rather than within a narrowly material 'push/pull' framework.

Attention must now turn to those places which attracted the migrants. The rest of this thesis therefore comprises a detailed examination of the patterns and processes of movement into two of the county's growing population centres in the 1870s.

CHAPTER 5. THE GROWTH OF SCUNTHORPE

Victorian Britain witnessed the rise of many new communities. These ranged from small pit villages through to new towns like Barrow-in-Furness, Crewe and Middlesbrough. However large, they had two things in common. First, they depended almost exclusively upon in-migration for their initial growth. Second, their foundation and expansion were usually based upon a single industry. The modern town of Scunthorpe is such a place. It began life as five small villages which were transformed into an industrial town through the growth of one industry: iron.¹ This chapter and the next examine migration into four of these five communities in the early years of their expansion, when iron production had not long begun and the workforce was new, brought in from outside.²

I

Before the arrival of the iron industry the Scunthorpe area was exclusively agricultural. Surrounding land was given over to farming, and the local sandy commons under which the precious iron lay had a long history as rabbit warrens.³ The precise date of the discovery of ironstone in the area is unknown. Its exploitation was largely the initiative of a major landowner in the district, the Winn family of Nostell Priory in Yorkshire. In the 1850s Rowland Winn explored the possibility of exploiting the iron ore on their north Lincolnshire estate. By 1859 analysis of ironstone samples encouraged him to go ahead with development, and later that year he leased land to the iron masters W.H. and G. Dawes of Elsecar, near Barnsley, to mine the stone. In 1861 a lease for a smaller area was given to Samuel Beale and Company of Parkgate works in Rotherham.⁴

Dawes commenced mining the ore in July 1860, taking it to the Elsecar works by cart and river for smelting.⁵ Before long, however, these pioneers had

decided to smelt some of the ore on site. Dawes built the first blast furnaces in the area, beginning smelting in 1864. These works became the Trent Iron Works.⁶ By 1870 Dawes had three furnaces working.⁷ Others soon joined them. Joseph Cliff, a brickmaker and coal owner from Wortley near Leeds, built some larger furnaces which also started smelting in 1864, known as the Frodingham Iron Works. A third company began smelting in 1865: the North Lincolnshire Iron Works, owned by a group of Lancashire partners.⁸

By the end of the decade the industrial future of the area was assured. The *Mining Journal* reported that

‘there is very little doubt but that in the course of a few years the district will become an important centre of the iron trade, giving employment to a large number of persons and ensuring to the capitalist a sure field for profitable investment’.⁹

During the 1870s the three companies consolidated their position by building more furnaces and replacing old ones. They were joined by three newcomers. In 1873 the Lincolnshire Iron Smelting Company blew in their first furnace, and were joined in 1874 by the Redbourn Hill Iron and Coal Company. The last company to set up in the area was the Appleby Iron Company, a Scottish firm who built two furnaces just over the parish boundary in neighbouring Appleby. These began operating in 1876. The first five years of the decade saw the production of iron in the district rise by over 400%.¹⁰

Although located in a remote rural area, the district was from the outset blessed with good communications. The river Trent and the Humber estuary were close by and in 1866 the Trent, Ancholme and Grimsby Railway opened, connecting the district with the Manchester, Sheffield and Lincoln Railway at nearby Barnetby.¹¹ The iron masters had easy access to other centres of the iron industry, most notably south Yorkshire. Furthermore, by the mid 1870s ‘considerable quantities’ of iron were reported to be shipped overseas weekly

from Grimsby and Hull.¹²

Until the opening of the steelworks in 1890 the Scunthorpe area only participated in the basic, primary stages of production. There were two main activities. First, the excavation of ironstone for direct transportation to other centres of the industry and to supply the local furnaces. Second, the smelting of some of the stone to produce pig iron which was then transported for processing elsewhere. There were ten ironstone mines working by 1881.¹³ The first two iron works, the Frodingham and the Trent, mined their ore themselves, but the later-established works were supplied with ore from Winn's own mines which produced about half the total ironstone mined in the area.¹⁴ Moreover, further companies were given leases just to mine the stone without smelting it on site. These included the Parkgate Company of Rotherham, the Yorkshire Iron Company of East Ardsley, and the Stavely Coal and Iron Company of Chesterfield. These firms transported all their stone back to their respective works, although the proportion of ore sent out of the area was never greater than 25%.¹⁵

The close of the 1870s marked the end of the first stage of the growth of the iron industry in the area.¹⁶ No more works were erected until after 1900, but the industry was already described as being 'of vast proportions'¹⁷ and the area had been transformed:

'Scunthorpe Common - a perfect rabbit-warren, and where in riding a horse, I was once nearly tripped in a rabbit hole - is now a mass of smelting works'.¹⁸

II

As industry grew, so did settlement. As early as 1866 the industrial developments were such

'that the barren and uninhabited waste of some three or four years ago promises to rise into a place of no small importance, and to become a second Middlesbro'.¹⁹

The precise destination of newcomers within the area was a function of the availability of housing. This in turn depended on both geography and landownership. In Figure 5.1 it can be seen that the iron villages witnessed disparate rates of growth. Those two townships which grew most, Ashby and Scunthorpe, had the highest number of landowners and the smallest proportion of land owned by the lord of the manor. Scunthorpe also had the advantage of close proximity to the iron mines and smelting works. Living in Ashby, on the other hand, entailed a two-mile journey to work for the iron men. Thus its growth was also the result of the lack of accommodation elsewhere. In comparison, Crosby and Brumby saw very little growth. The first was almost wholly owned by the Sheffield family who refused to allow its development until after 1900. (Moreover, this prevented any further north-west -wards expansion of Scunthorpe once its streets had grown to the township boundary with Crosby in the mid-1880s.) By contrast, Brumby had a fragmented pattern of property ownership, yet development here was confined to the building of the small settlement of New Brumby by a leading landowner, Lord Beauchamp. Frodingham, like Crosby, was a 'closed' village. But here the landowner was Winn himself, and growth took place, albeit in a controlled manner.²⁰ This mainly took the form of the building in the mid-1860s of the detached settlement known as New Frodingham. This comprised 193 small houses arranged in six streets, each street being roughly allotted to employees of the various companies, including Winn's own miners.²¹ A hall, reading room, library and school were also provided, along with allotments and a cricket ground.²² The iron companies also played a part in the residential development of the area. Some workers were housed on site at four works – Trent, Redbourn Hill, North Lincolnshire and Appleby.²³

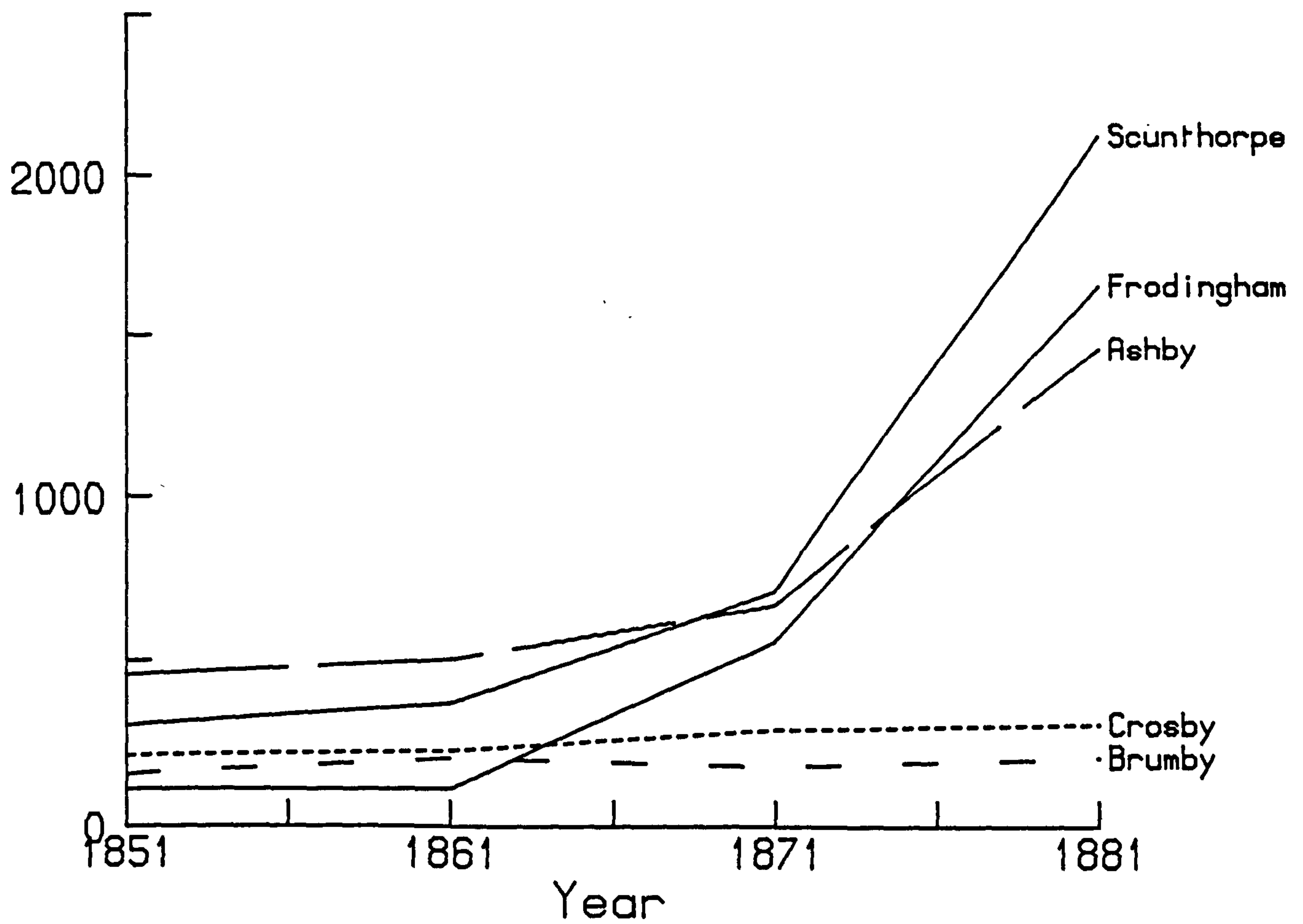


Figure 5.1

Population of five townships which later constituted the Borough of Scunthorpe.

Source: published censuses.



Figure 5.2 First edition Ordnance Survey map, 1889, based on a survey of 1885, 6 inches per mile, here reduced by 50%.

The five villages which made up the town of Scunthorpe in 1919 are visible, along with the two new settlements of New Frodingham and New Brumby.

Of the five townships, by the 1880s most of the growth had taken place in Ashby and Scunthorpe, together with the two new settlements in the Brumby and Frodingham boundaries. Figure 5.2 is a reproduction of the first edition six inch Ordnance Survey map of the area, based on a survey of 1885. Obviously the district had a long way to go before it could be justifiably called a town. It is best described as a nascent urban area. Pocock has located the following description from 1888 which captures the transitory nature of the area at this time:

'Imagine a low-lying extent of green meadow and stunted tree, broken here by a group of stone-faced dwelling houses and a substantially built street or two, and there by a long line of railway stretching its sidings on either hand to where huge black furnaces rear their smoky tops; carry your eyes further and beyond the blossoming hedgerows to where the flat surface of the earth assumes a well-wooded and undulating appearance, and you have, almost at a glance, the district familiarly known as Frodingham and Scunthorpe'.²⁴

But while the pervading image is rural, already the seeds of urban growth had been sown. 'The village of Frodingham promises to be in a few years an extensive town' declared White's Directory in 1882.²⁵ This was even more evident in Scunthorpe, the largest of the townships: 'in '81 the village became a town with 2048 inhabitants...' proclaimed a local newspaper.²⁶ By the 1880s Scunthorpe township had certainly become the service centre for the surrounding area. This is illustrated by the growth in retail provision within each settlement. In 1861 Ashby had nine shops, Brumby and Frodingham two each and Scunthorpe five. In 1885 the numbers had risen to sixteen, seven, nine and fifty respectively.²⁷ New amenities and civic buildings - churches, schools, libraries, hospitals, institutes and sports clubs - sprang into existence, largely under the patronage of Rowland Winn (first Lord St. Oswald from 1885), the clergy and (sometimes) the iron masters. The whole paraphernalia of Victorian cultural and civic life began to bloom in the district.²⁸ By the 1890s Scunthorpe Township had eclipsed the old market

towns of north Lincolnshire. A cattle market was held every fortnight, and by 1891 Scunthorpe spring fair was reported to be 'one of the most well known and best attended in the district', with farmers and dealers attending from afar.²⁹ The settlements which had mushroomed through but a single industry had now achieved a wider importance.³⁰

III

The pattern of economic activity in the area in 1881 is shown in Table 5.1. Of immediate impact is the low proportion of females enumerated as actively occupied. Only 217 out of 2486 females were enumerated as in paid employment. It seems that the early industrial Scunthorpe district was similar to other areas of heavy industry and mining in the Victorian period, with few women in paid work and scarcely any married women doing so (Table 5.2).³¹ The participation of women in the labour force was higher in the county as a whole. At the same census, about 18.5% of the total female population of the Registration County were recorded as occupied (excluding those classed by their husbands' occupation), compared with 8.8% deemed economically active in the four townships. The largest single female occupation in Lincolnshire at this time was domestic service – as it was nationally. Slightly over 10% of all women were so employed in the county in 1881; the figure for the study area was a mere 5.4%. The proportion of Lincolnshire females employed in agriculture as day labourers or farm servants was minute by this time, being less than 1% in 1851 and falling to 0.4% by 1881.³² Of course, the census failed to capture much seasonal farm work by women, but such employment was declining in the county by the 1870s. Moreover, there seems no reason why such work should not have been equally accessible to women living in the Scunthorpe area. They could have walked to farms in neighbouring parishes.

TABLE 5.1 ECONOMIC ACTIVITY RATES OF MALES AND FEMALES AGED
10 AND ABOVE, FOUR SCUNTHORPE DISTRICT STUDY
TOWNSHIPS, 1881

	MALES %	FEMALES %
Active	82.3	13.5
Not Active	17.1	86.0
Unemployed	0.3	0.1
Pauper	0.2	0.1
Independent	0.1	0.4
	<hr/>	<hr/>
	100.0	100.1
	(N=1883)	(N=1595)

Source: C.E.Bs.

Note: The category 'not active' includes a very small number of persons enumerated as 'retired', 'pensioner', 'sick' and as having 'formerly' followed an occupation.

TABLE 5.2 ECONOMIC ACTIVITY RATES OF FEMALES AGED 10 AND ABOVE, BY MARITAL STATUS, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

	<u>SINGLE</u> %	<u>MARRIED</u> %	<u>WIDOWED</u> %
Active	31.4	4.1	23.5
Not Active	68.4	95.7	66.2
Unemployed	0.2	-	-
Pauper	-	0.1	1.5
Independent	-	0.1	8.8
	<hr/>	<hr/>	<hr/>
	100.0	100.0	100.0
	(N=500)	(N=1027)	(N=68)

Source: C.E.Bs.

Note: See notes to Table 5.1

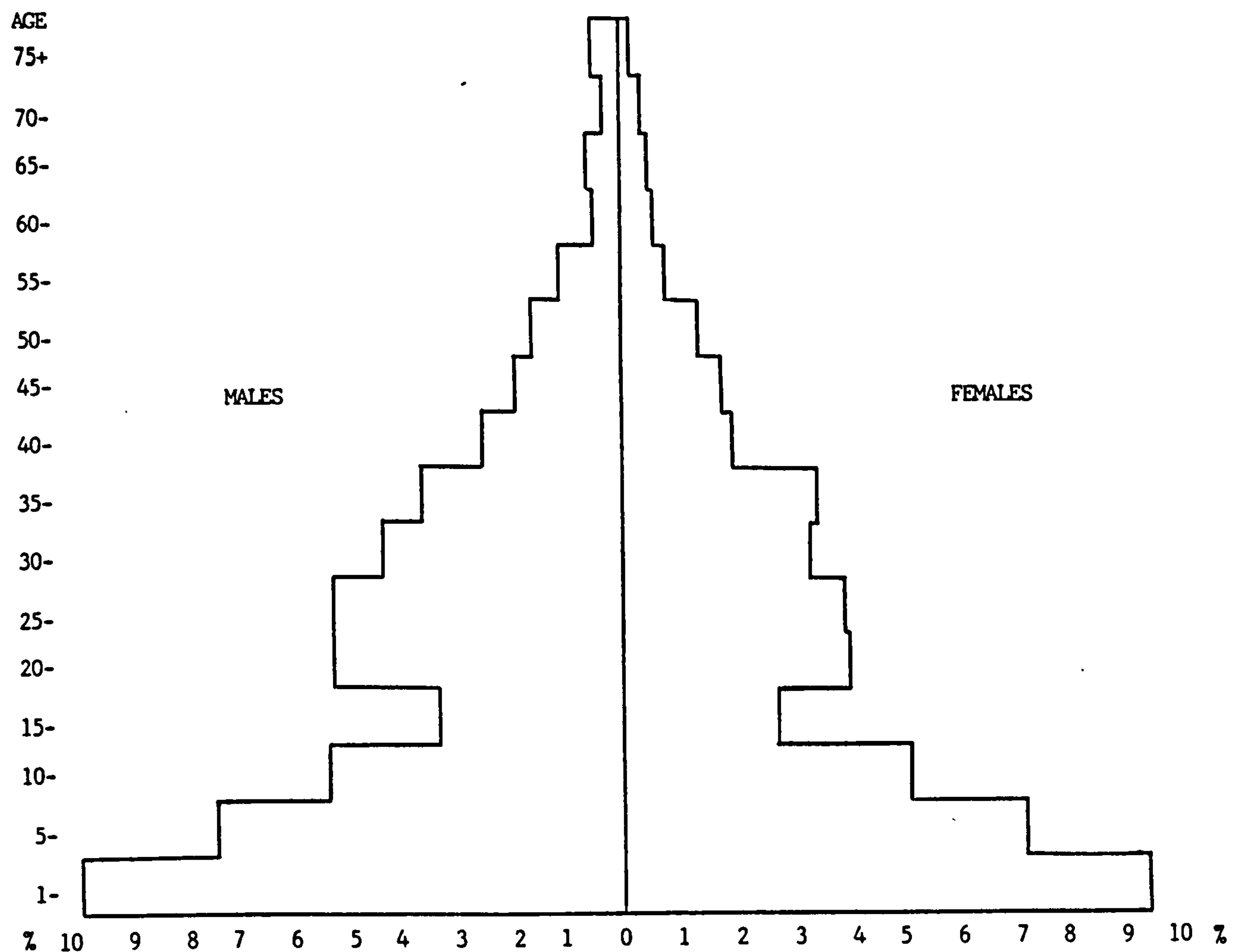


Figure 5.3

Population structure of four Scunthorpe district study townships, 1881.

Source: census enumerators' books, 1881.

One thing is clear: families did not move into the iron villages because of any increased opportunity for women to work. This places the analysis of migration into the district squarely in the male quarter. The jobs on offer were for men and it must have been the opportunities available for male employment which were crucial. The overall sex ratio in the four townships in 1881 was 112.6 males to every 100 females, and Figure 5.3 shows this imbalance to have been particularly acute at those ages where migration and employment in the iron industry were most pronounced.

The most potent general attractions were job opportunities and the higher wages available to men in the iron industry. Precise figures on earnings are not available, but it appears that an 'average' labourer in the iron works or quarries earned about 23-24 shillings a week in the mid-1870s, when agricultural labourers in north Lincolnshire earned between 15 and 17 shillings a week. As Lincolnshire was a 'high wage' county at this time, and given that the competition from the iron industry probably enhanced farm wages in the vicinity, the differential was probably even greater than this for those migrants from more distant rural areas.³³

Turning to the structure of male employment, deficient enumeration of occupations in the census makes it difficult to identify those who worked in the iron industry. While many are recorded unequivocally as so engaged, others are not. These problem cases take three forms. First, many craft titles are ambiguous. For example, it is not clear whether those enumerated as 'blacksmith' were employed in the iron works or in their own or a master's smithy in one of the villages. The iron companies certainly employed such men.³⁴ Cross-reference to a contemporary trade directory provides elucidation in only a few cases. A second source of confusion is the overlap between employment on the railways and in the iron industry. A 'platelayer' or 'railway engine cleaner' could have been employed on the Trent, Ancholme and

Grimsby Railway, or in maintaining the railway used to transport materials within the iron works and quarries – or both.³⁵ Lastly, 153 men were enumerated simply as 'labourer'. Most of these were probably employed in the iron industry, but doubtless some were agricultural workers and others general jobbing labourers.

Given these problems, ambiguous cases have been kept separate from the more concrete. Thus Table 5.3 includes an intermediate group (designated group B) comprising those whose sector of employment is uncertain. A full breakdown of the allocations can be found in Appendix D.

Such a classification gives the maximum possible number of males directly engaged in the iron industry as 1125, which is 72.6% of all working males. As this includes some men who were positively identified from White's Directory of 1882 as independent craftsmen it is certainly an overestimate. Excluding those persons in category B in Table 5.3 gives a minimum of 835, which is 53.9% of the working male population. If the minimum number is combined with just those recorded as unspecified labourers, the figures are 989 and 63.8% respectively. In all, it seems reasonable to venture that at the very least 60% of the occupied males in the four townships were directly engaged in the iron industry in some capacity.

Turning to the structure of employment within the iron industry, similar problems of identification occur.

Extraction and smelting of the ore were the two activities of the early north Lincolnshire iron industry. Given the close proximity of the furnaces to the mines, these two probably appeared to observers to be one continuous process. Some tasks in the furnace works were indeed indistinguishable from those in the mines. The transportation of materials from site to site is but one example. But these were exceptions. Work in the mines and work in the

TABLE 5.3 OCCUPATIONAL STRUCTURE OF THE ECONOMICALLY ACTIVE,
FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

	MALES %	FEMALES %
(a) DEFINITELY EMPLOYED IN THE IRON INDUSTRY		
Iron Masters	0.2	-
Managerial/Clerical	1.4	-
Iron workers	19.2	-
'Labourer at the iron works'	8.3	-
Iron miners	24.8	-
	<u>53.9</u>	
(b) POSSIBLY EMPLOYED IN THE IRON INDUSTRY		
Craftsmen, tradesmen, clerical workers	7.2	-
Railway workers	1.6	-
Unspecified 'labourers'	9.9	-
	<u>18.7</u>	
(c) DEFINITELY NOT EMPLOYED IN THE IRON INDUSTRY		
Agriculture	13.0	6.1
Trade	7.2	6.1
Craft	2.6	20.2
Railway	1.3	-
Servants	1.0	62.9
Medicine, Education, Clergy	0.9	4.2
Other	1.4	0.5
	<u>27.4</u>	<u>100.0</u>
	100.0	100.0
	(N=1550)	(N=213)

Source: C.E.Bs.

Note: See Appendix D for the allocation of individual occupational titles.

iron works were clearly different, and were seen to be such. Evidence at a national level reveals contemporaries tended to class iron miners with coal miners rather than other iron workers.³⁶ Moreover, in the local union activism of 1891 the north Lincolnshire iron miners were engaged in a separate dispute from that of the iron workers and were generally recruited into the Cleveland Miners' Association rather than the National Association of Blast-Furnacemen.³⁷

Table 5.3 shows that almost 25% of occupied males described themselves as 'iron miner'. Of the other manual categories in group A in that Table, it would seem that all were employed in and around the smelting works rather than as iron miners. The only ambiguous category is that of men described as 'labourer at the iron works' (or some similar title). Doubtless these included iron miners, but the census enumerators appear to have clearly identified those who were iron miners throughout the four townships. Sometimes the two terms, 'iron miner' and 'labourer at the iron works', appear within the same street or even the same household. Variation in nomenclature is unlikely to be wholly the result of the quirks of individual enumerators. In addition, a portion of a wages sheet from the Frodingham Iron Works for November 1875 explicitly differentiates between 'miners' and 'labourers' (this being one of the two companies which mined their own ore), and of the nine 'miners' listed there, six have been traced to the 1881 census: all were recorded there as iron miners, none as 'labourers'.³⁸ Thus it seems justified to deem this group furnace labourers. In all, therefore, a quarter of all occupied males were definitely employed as miners in the iron quarries, and just over a quarter in and around the blast furnaces.

It is difficult to allocate those persons in group B in Table 5.3 to the appropriate work scene. Most of those in the first two categories, 'craftsmen and others' and 'railway workers', probably worked in connection with the

furnaces. The large class of unspecified 'labourers' remains a total mystery. If we assume that of these labourers who worked in the iron industry, the furnaces and quarries were equally well-represented, then it appears that the former employed the more workers. (Indeed, such an assumption probably understates the importance of furnace work, given the apparently clear specification of the miners in the census (see above)). A rough estimate must be about 30-35% of the male workforce employed in and around the furnaces, with a further 27-28% in the ironstone mines. To preserve accuracy, however, all those men in group B have been excluded from this analysis.

A whole range of occupational titles is given in the census to cover those involved in smelting the ore. However, the distribution of these titles does not accord exactly with what is known of the labour process in the iron industry at this time. For example, only seven furnace 'chargers' or 'fillers' are recorded, at a time when there were fourteen furnaces in continuous active blast in the area. Obviously, many specific tasks are subsumed among such labels as 'furnaceman', 'fireman at furnace' and 'furnace labourer'. Furthermore, the extent to which any clear division of labour actually existed in the works of the 1870s and 1880s is uncertain. It seems, however, that while a whole range of tasks were involved in furnace work, there was in practice a broader division in existence based on skill and experience. The companies clearly differentiated between those whom they regarded as labourers and those whom they regarded as specialists. For example, during the industrial unrest of 1892-3 the iron masters spoke of only two classes of iron worker: 'keepers' and 'labourers'.³⁹ It is difficult to ascertain the relative size of these two broad classes of furnace worker. Census titles rarely give any firm indication of the level of skill involved. Nor can the extent of movement between the different groups be assessed and allowed for.

Nevertheless, an attempt has been made, using other assorted references to particular jobs together with information on the labour process. In addition, reference was made to the Registrar General's 1951 Classification of Occupations for doubtful cases. Although anachronistic, the 1951 schema is based on skill differentials, which had not changed drastically in the iron smelting industry in the intervening period. The allocation of particular titles to each class is given in Appendix E.

Overall, employees in the iron industry have been allocated to one of four broad groups for the purposes of analysis. These are:

1. Managerial/clerical (exactly synonymous with that in Table 5.3)
2. 'Higher' manual iron workers: those employed in and around the blast furnaces in jobs deemed to require some skill and experience.
3. 'Lower' manual iron workers: those employed as labourers in and around the furnaces.
4. Iron miners: those employed as labourers in the ironstone quarries.

Table 5.4 gives the structure of employment in the iron industry in these terms. The totals are minima, as they only include those positively identified as workers in the iron industry -group A in Table 5.3.

IV

The iron industry was the cause of the district's growth; migration was the initial means. In the 1870s and 1880s, the settlements were migrant communities (Table 5.5). In time, of course, the high fertility of the iron families allowed the district to become more self-sufficient in labour⁴⁰, but in 1881 natives were thin on the ground. Overall, 67% of the total combined population of the four townships had been born outside the settlements. Well over 80% of adults were migrants.

TABLE 5.4 **THE STRUCTURE OF EMPLOYMENT WITHIN THE IRON INDUSTRY,
POSITIVELY IDENTIFIED ECONOMICALLY ACTIVE MALE IRON
EMPLOYEES, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS,
1881**

	WITHIN THE IRON INDUSTRY %	OF THE TOTAL LABOUR FORCE %
Managerial/Clerical	2.6	1.4
'Higher' iron workers	19.4	10.5
'Lower' iron workers	31.9	17.2
Iron miners	46.0	24.7
	<hr/>	<hr/>
	99.9	53.7
	(N=833)	(N=1550)

Source: C.E.Bs.

Note: See Appendix E for the allocation of individual occupational titles.

TABLE 5.5 PROPORTION OF THE POPULATION NON-NATIVE, BY AGE AND SEX, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

AGE	MALES		FEMALES	
	%	(N)	%	(N)
0-	9.6	(115)	8.8	(113)
1-	27.9	(401)	30.3	(386)
5-	50.3	(386)	53.3	(379)
10-	62.6	(270)	65.2	(270)
15-	79.5	(166)	81.4	(145)
20-	89.6	(270)	86.0	(215)
25-	89.2	(493)	90.2	(386)
35-	87.1	(318)	87.9	(265)
45-	85.7	(182)	87.7	(162)
55-	88.4	(85)	88.6	(70)
65-	<u>69.7</u>	(66)	<u>86.9</u>	(61)
TOTAL	67.4	(2752)	67.1	(2452)

Source: C.E.Bs.

- Notes:
- 1) A non-native (or migrant) is here defined as someone born completely outside the study district.
 - 2) Individuals with no identifiable county of birth or, if born in Lincolnshire, no identifiable community of birth, are excluded from the analysis.

TABLE 5.6

PROPORTION OF THE POPULATION NON-NATIVE, BY AGE AND LOCATION, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

Age	<u>Ashby</u>		<u>Bramby</u>		<u>Frodingham</u>		<u>Scunthorpe</u>	
	%	(N)	%	(N)	%	(N)	%	(N)
0-	11.8	(68)	18.7	(16)	10.3	(58)	11.6	(86)
1-	35.0	(223)	46.4	(56)	41.5	(207)	40.2	(301)
5-	59.4	(229)	78.2	(55)	65.3	(216)	61.1	(265)
10-	64.7	(153)	84.6	(39)	81.8	(165)	75.4	(183)
15-	78.2	(78)	75.0	(28)	97.6	(83)	90.2	(122)
20-	87.0	(115)	82.6	(46)	94.6	(111)	93.9	(214)
25-	85.2	(223)	100.0	(66)	96.8	(217)	95.7	(374)
35-	80.1	(156)	90.9	(44)	99.4	(162)	91.9	(221)
45-	81.4	(86)	91.3	(46)	100.0	(85)	89.8	(127)
55-	84.9	(52)	100.0	(9)	97.6	(41)	96.2	(53)
65-	73.9	(46)	83.3	(6)	76.2	(21)	92.6	(54)
TOTAL	66.1	(1429)	79.3	(411)	78.0	(1366)	75.9	(2000)

Source: C.E.Bs.

- Notes: 1) A non-native (or migrant) is here defined as someone born outside the township of enumeration, and therefore includes those born in another township within the study district.
- 2) Individuals with no identifiable county of birth, or, if born in Lincolnshire, no identifiable community of birth, are excluded from the analysis.

Table 5.6 breaks down the figures by location. The high proportion of non-natives in Brumby and Frodingham reflects the establishment of the totally new settlements within their boundaries. Scunthorpe, the fastest growing township, is similarly dominated by migrants. Ashby is less dominated, reflecting its greater distance from the iron works. Particularly noteworthy is the relatively high proportion of migrants among infants and children (compared, for example, with the Grantham figures in Tables 7.6 and 7.7 in Chapter 7). This suggests a considerable amount of family in-migration, a point explored more fully in Chapter 8.

As well as recording a high proportion of migrants, the district also seems to have experienced a high degree of population turnover. Evidence is admittedly scarce on this point, but some information is available concerning those connected with the iron industry. Of those household heads employed in the iron industry who were living in Scunthorpe township in 1871, 54.8% were still living there ten years later. This 'persistence rate' is actually quite high, but almost certainly understates the true level of turnover.⁴¹ In the mid-1870s a falling off in exports led to depression in the British iron industry which lasted until 1879.⁴² The north Lincolnshire iron trade did not escape this slump. The local Medical Officer of Health estimated that in one year between 1876 and 1877 1000 people moved right out of the four iron villages to destinations beyond the Registration District. An even greater number, he reported, had transferred to other locations within that District.⁴³ Given the probable size of the population of the four townships in 1876 (estimated by the M.O.H. to be 5430) such outward movement is quite massive in scale. Even allowing for exaggeration, the depression obviously created a high degree of turnover. A great many migrants to the district seem to have subsequently departed, their presence completely unrecorded by the decennial census.

Clearly, the expansion of the district was no steady, continuous process. The pace of growth was subject to the vagaries of the wider market for iron. Other factors, indigenous to the local iron industry, were also at work. First, the companies did not arrive at regular intervals, so the job market expanded by fits and starts. Moreover, the commencement of smelting was a hesitant affair. The first furnaces were bedevilled with technical problems. Explosions were frequent, repairs a continual necessity as the companies experimented with different methods of smelting the ore. Furnaces which were working to full capacity one day could be idle the next - 'out of blast' - with large numbers of men laid off.

The influence of such volatile activity, both at the national and local level, is reflected in the annual volume of in-migration. While no direct evidence is available, a crude profile of net movement into the area can be drawn using information on children's ages and birthplaces. Analysis is restricted to migrant fathers with at least two co-resident children, one a native and the other a migrant. The age of the ~~youngest~~ migrant child gives an indication of the earliest date at which the family moved into the area. The age of the oldest native child gives the latest date the family in-migrated. Hence the mean of the two ages can be used to estimate the year of arrival.⁴⁴

Figure 5.4 shows the results of this exercise for those positively identified as manual employees in the iron industry.⁴⁵ The number of furnaces actively in blast in each year is used as a surrogate measure of job opportunities. Given the small number of cases involved, it seems wise to ignore the information on the 1860s.⁴⁶ For the 1870s, the peaks in net in-migration appear to coincide with those in local industrial activity. The expansion of the industry in the early- to mid-1870s and the subsequent depression are clearly visible. Interestingly, the second peak in the volume of net in-migration in the 1870s is much less marked than the first, despite the sharp expansion in economic

Figure 5.4

Estimated annual number of in-migrants employed in manual iron occupations, persistent to 1881, together with local employment opportunities, four Scunthorpe district study townships, 1881. (See text for explanation).

Source: CEBs 1881; Birch (1967), 139.

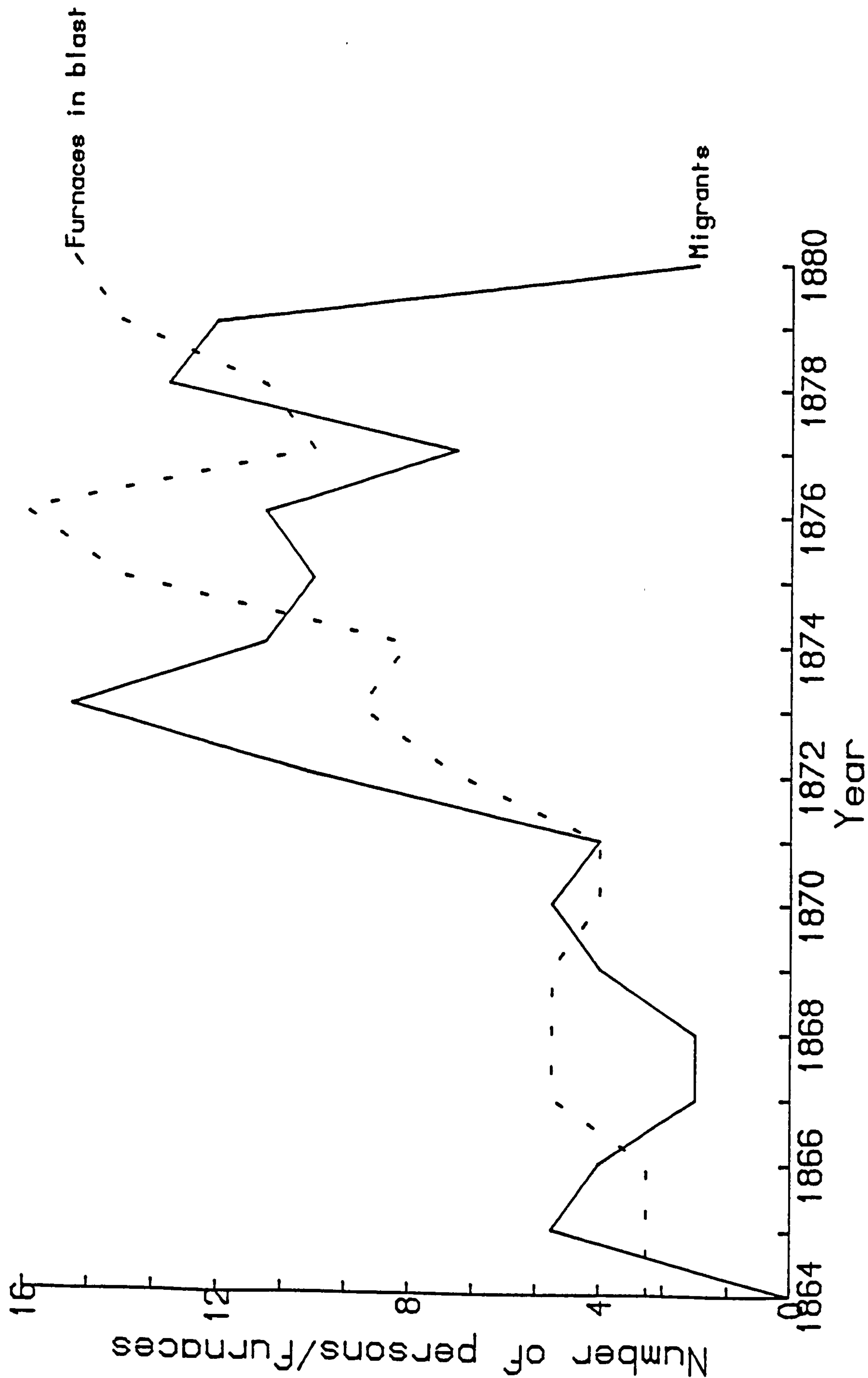
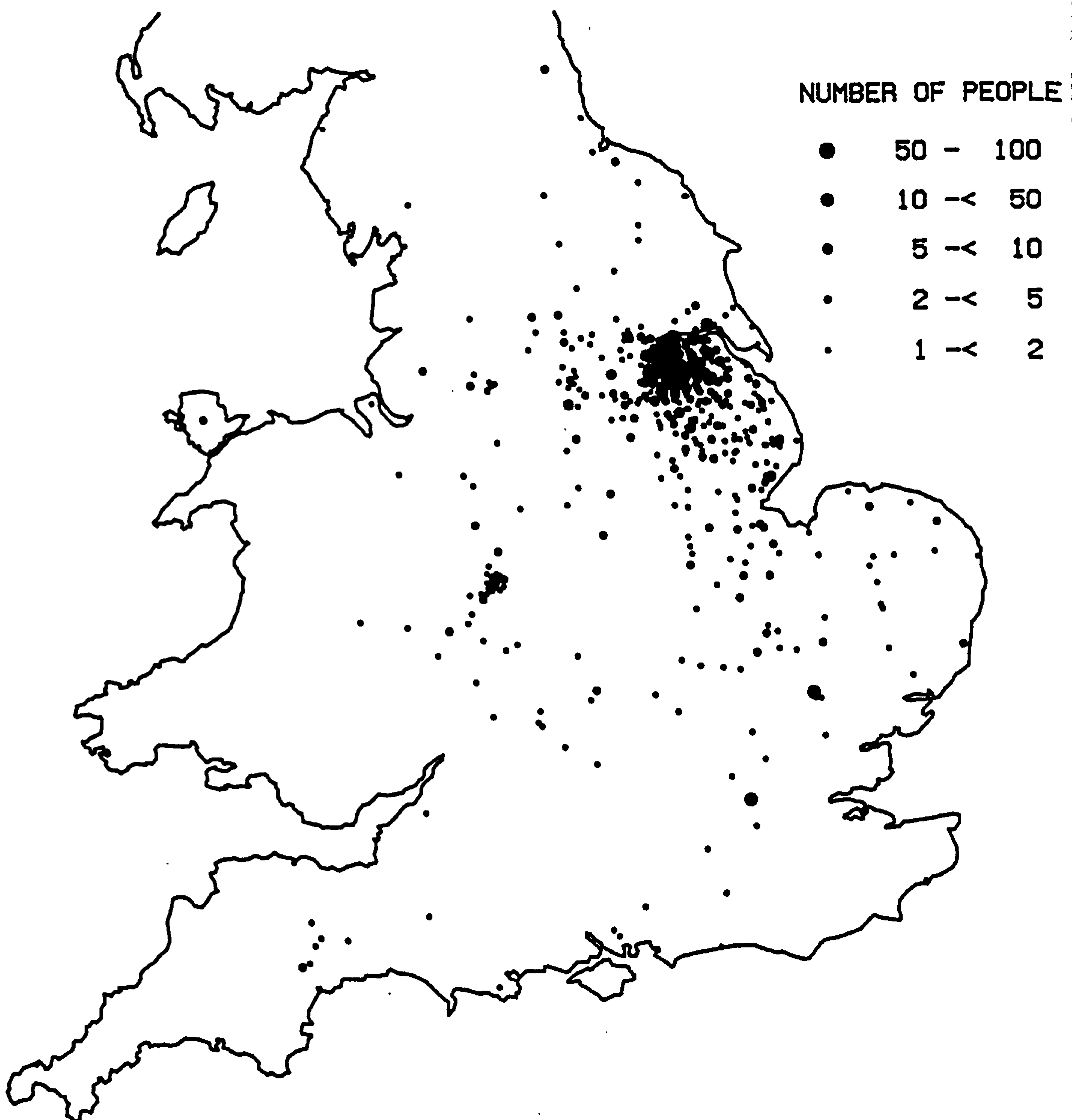


Figure 5.5

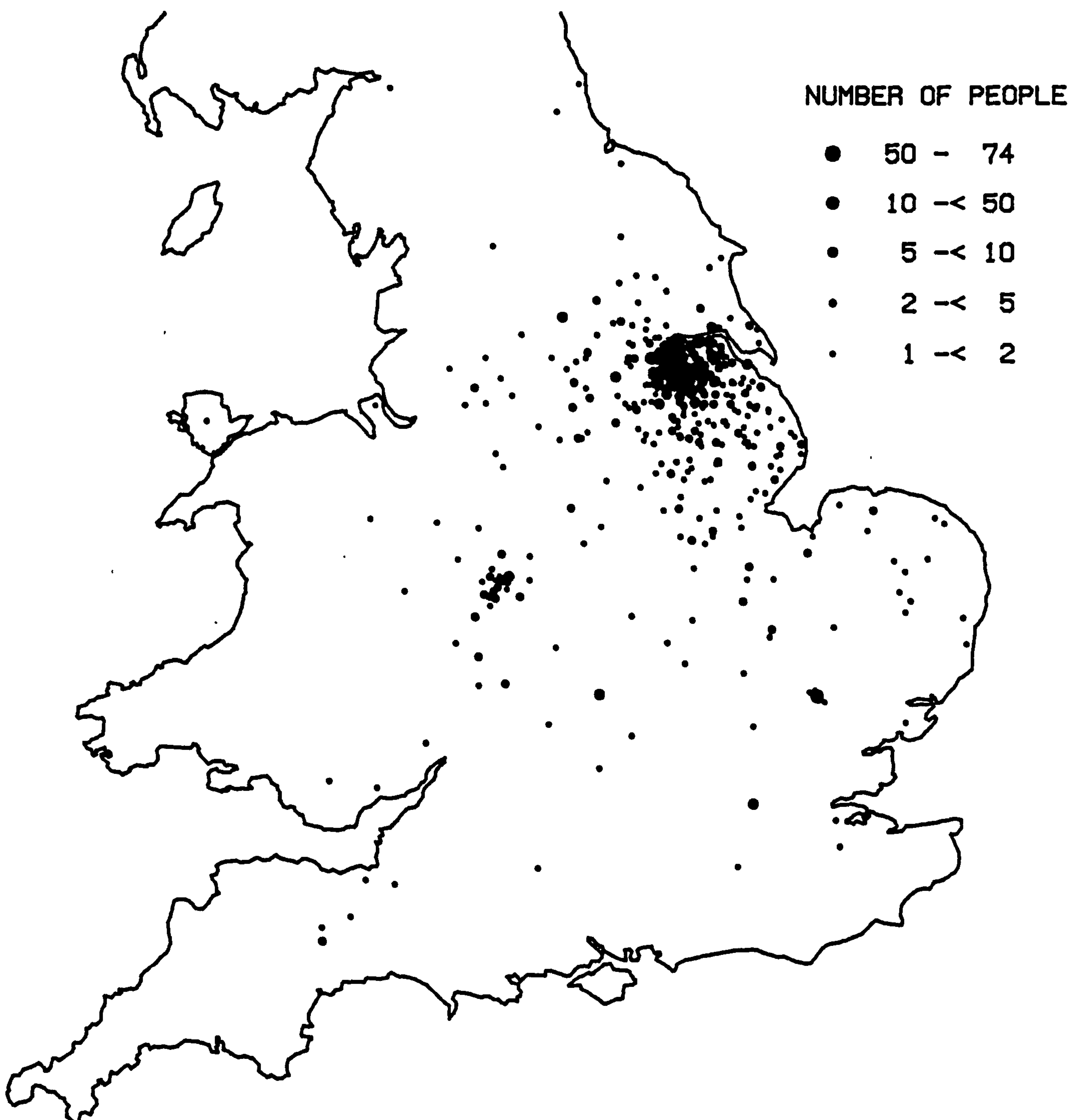
BIRTHPLACES OF MALES
(CHILDREN EXCLUDED)
SCUNTHORPE DISTRICT 1881



Source: C.E.B.s

Figure 5.6

BIRTHPLACES OF FEMALES
(CHILDREN EXCLUDED)
SCUNTHORPE DISTRICT 1881



activity in the years immediately prior to 1876. This reflects the subsequent depression, as noted by the Medical Officer of Health and others.⁴⁷ Many of those who in-migrated in mid-decade left soon after, while earlier arrivals had obtained more secure employment. The peak in the late 1870s coincides with both the national export-led boom beginning in 1879 and local developments. There was a marked upturn in the local iron trade in the autumn of 1879 through to the summer of 1880, after which trade fell off.⁴⁸ The sharp plunge in the volume of in-migration after 1879, however, is an artefact of the method.⁴⁹

Economic factors also affected the spatial pattern of in-migration. Figures 5.5 and 5.6 show the origins of all inhabitants (excluding children⁵⁰) of the four townships who possessed a precisely identifiable English or Welsh community of birth. Others, not shown, came from Scotland, and there were more from Wales who failed to record a precise birthplace.

The Figures present a striking picture. While short-distance movement clearly predominated, the migration field was remarkably large. These remote, nascent industrial communities, scarcely twenty years old, had already made an impact in numerous homes and settlements all over Britain.⁵¹ Certain areas, such as the Black Country, were notable sources of migrants. In all, migration into the district bears out B.J. Turton's observation that

'The process of urban expansion in the industrial areas of Britain frequently depended on migration from local areas for a substantial proportion of the population increases involved, but in those cases where one specialist industrial activity completely dominated the employment structure of a growing town more particular patterns of labour movement can be discerned'.⁵²

The next chapter explores the nature of labour migration into the district in more detail.

CHAPTER 6. WORK AND MIGRATION IN EARLY INDUSTRIAL SCUNTHORPE

White and Woods have written that

'In general..it can be said that migration is often selective of potential movers according to a wide range of economic and social attributes of the population, but that those attributes which appear to produce the over-representation of certain population groups differ from place to place and from migration flow to migration flow'.¹

In the literature on nineteenth century Britain, however, this relationship between migration patterns and economic structures has largely been seen in terms of skill differentials.² Thus skilled workers could be less mobile than the unskilled because they possessed more secure and regular employment. On the other hand, those skilled workers who did migrate tended to move longer distances, as specialist job opportunities were thinner on the ground and such workers supposedly possessed more initiative. Thus where the demand was for men with relevant skills and experience, long-distance movement prevailed; where menial, unskilled jobs were on offer, local movers dominated the migrant stream.³

This phenomenon can be illustrated by two existing studies of newly-founded industrial communities, each based on the 1851 census. Such places provide particularly good conditions in which to explore the relationship between skill and migration profiles, as they were usually based on a single industry and most workers were migrants. Royle's study of the new mining village of Coalville in Leicestershire found that while some miners came from existing coal settlements some distance away, the majority came from local agricultural villages.⁴ Most jobs could be filled by men who were new to the work. A rather different picture is found by Turton in his study of the new railway town of Crewe.⁵ The work there was mainly skilled, the demand for men with some experience in the engineering industry. Thus

'Any development of a local in-migration process from rural Cheshire was severely inhibited by the fact that these areas contained a primarily rural-agricultural population unacquainted with the trades of railway rolling stock production and few of the skilled works employees recorded a Cheshire birthplace'.⁶

Hence most migrants came from established centres of the industry, the most prominent being nearby Liverpool.

Two more recent studies, however, would appear to cast doubt on this simple model of the relationship between skill and migration. J.T. Jackson's study of the St.Helen's glassmakers in the mid-nineteenth century found that both traditional 'crown' glassmaking and the more modern 'sheet' glassmaking required specialist, highly skilled workers.⁷ But a noticeably higher proportion of skilled crown glass workers were long distance migrants than were sheet glass workers. The reason lay partly in differences in the degree of craft control over entry to the trade. Apprenticeships in crown glassmaking were restricted to the sons of glass makers; the training of skilled sheet glassworkers was more open and local boys could be recruited. Coupled with this was the effect of the changing structure of the industry. The crown sector was contracting, its skilled practitioners forced to move long distances into those places where their skills were still relevant.

A similar situation is found in Peter Cromar's study of migration into two mid-Victorian Sheffield suburbs.⁸ Skilled men in the 'light' cutlery trade of Walkley suburb exhibited a marked tendency to have come from urban centres, especially Sheffield itself, whereas skilled workers in the heavy industry of Brightside suburb showed no such tendency. Cromar suggests the cause of this difference lay in the social relations surrounding the dominant industry in each locality. In the light steel industry, trade unions regulated entry into the trade, restricting recruitment to unionised men from Sheffield and other urban centres. Thus the unions maintained their strong

hold, and the migration system became self-perpetuating, at least until the introduction of machinery undermined the unions' grip. In contrast, the unions in the heavy industry were weak; they could exercise no such control. Employment, even for most skilled men, was casual.

'So the social structure of the area had a massive impact on the migration field of that area and then that migration reinforced the social structure'.⁹

These two studies suggest that the orthodox interpretation of migration patterns is clearly open to revision. This chapter explores this problem further. It presents some evidence from the early industrial Scunthorpe district which also questions a simple 'skill-distance' model of migration patterns. First, the nature of work in the local iron industry is explored. Next, this work experience is related to patterns of in-migration. Lastly, there is an attempt to piece together the characteristics of labour recruitment in the district.

1. Working Life In The Early North Lincolnshire Iron Industry

Iron Mining

At the time studied here iron mining was a wholly manual activity. The term 'mining' is a misnomer: the work was, in fact, quarrying. The first task was to remove the overburden of sand and soil. This was known as 'baring' or 'stripping', and was the job of the 'sanders'. First, the overburden was dug and thrown into wheel barrows. When full, these barrows were wheeled away along narrow planks balanced on trestles, which could be as high as 25 feet, and the waste dumped into a part of the pit already worked. Once enough top waste had been removed, the ironstone could be extracted. Long holes

were drilled by hand to contain explosives. The men worked in twos or threes, one squatting on a box turning the drill and the other(s) 'striking' with sledge hammers. The rock was then blasted. This process was continued until the bottom of the ore bed was reached, and ironstone had been removed to the depth of nine feet. A railway was laid in the bottom of the trench, and the stone was manhandled into wagons after being graded according to its depth from the surface. The wagons then took the ore over to the furnaces, or were transported out of the locality to the docks or destinations inland.¹⁰

Iron Smelting

The labour process in the smelting works was more complex. Many tasks were involved.

1) 'Charging' the furnace. Ore from the mines was stored in bays near the furnaces. From here, the 'filler' shovelled the ore into large iron barrows, which he then hauled over to the hoist platform. The barrow was then hoisted to the top of the furnace - by hand in some works - by the 'lift-loader'. At the top, the 'chargers' wheeled the barrows along catwalks to the mouth of each furnace and tipped the materials inside.¹¹

2) 'Tapping' the furnace. This process was overseen by the Furnace Keeper - a highly skilled position.¹² The process took anywhere between ten and thirty minutes, and the whole operation was carried out several times a shift. Once the ore had melted in the bottom or 'hearth' of the furnace, the impurities floated to the top. This 'slag' was run off first, running directly into bogies containing a large mould each. Once partly cooled, this was broken up and

removed by horse and locomotive to be dumped on the ever-increasing slag banks. The pig iron itself was then tapped. A group of labourers knocked open the tap hole, quickly jumping clear as the molten metal poured out into moulds ('sows' and 'pigs') made in the sand 'pig-bed'. The hole was then blocked up again by men throwing clay balls into the opening. After cooling, the metal pigs were loaded into wagons by the 'metal carriers'.¹³

3) A third group of tasks were those connected with providing the actual blast for the furnaces: 'The furnaces cannot be going without the engine men to lift the stuff up and keep the blast on, and all that sort of thing'.¹⁴ Stationary engine men, engine cleaners, boiler men and gas men: all were involved in working the blowing engines located near the base of the furnace.¹⁵

4) Lastly, there was a whole host of miscellaneous tasks in the iron works, from office work to tending the horses which pulled the trucks. Numerous craftsmen were employed, as were many builders.¹⁶

Skill and Experience

With the exception of the foreman or 'ganger', labouring in the iron mines needed no real expertise and precious little experience. The Manager of the Redbourn Hill Works considered that 'The labour employed in winning the stone is of the commonest and most unskilled description'.¹⁷ Strength was the only requirement:

'The man who gets the ironstone must be capable of filling his 10/12 tons of ore per day, of drilling it and of breaking it up; the man who deals with the overburden has the no less arduous and onerous task of picking down and loading his barrow with his 24/30 yards of material and conveying it across perhaps 70 feet of plank bridge to the dump across the railway'.¹⁸

What of the furnace workers? Lady Bell, writing of Middlesbrough early this century, was clear:

'For the majority of the iron-workers, the main equipment needed is health and strength'.¹⁹

Yet it is clear from the description above that much of the work in and around the furnaces was quite 'skilled'. Many of those we have classed as 'lower' iron workers, it would seem, nevertheless possessed at least a modicum of manual dexterity over and above that required of the iron miners.²⁰ Charles More, in his work on skill in this period, has stated that:

'Iron and steel manufacture was probably the most important type of process work where skill was widely spread among the operatives'.²¹

Such tasks as charging and tapping the furnace needed a certain expertise in all those concerned. Although no system of formal apprenticeship existed in the iron smelting industry at this time, the informal method of 'following up' was used. One man learned a job by his attachment to a more skilled worker, while carrying out a full time job himself. This was largely a question of experience, with each iron works possessing a graded, hierarchical labour structure based heavily on length of service.²²

Working Conditions

A difference is also apparent when we look at working conditions.²³ Iron mining was by no means a soft option. The use of explosives and the precarious balancing of barrowloads of overburden on high, slippery, narrow wooden gantries were both dangerous aspects of the work. However, no reports of accidents in the mines have been found (in contrast to the many

accidents reported in connection with the transporting of the ore around the sites), and the working environment was, on the whole, similar to other types of outdoor labouring.²⁴ The same cannot be said for work in and around the furnaces. 'Charging' was 'arduous and trying to the health'.²⁵ Gas, flames and smoke poured out of the mouth of the furnace²⁶, and the men at the top were often overcome by gas, their only relief being a change of places with a man at the bottom.²⁷ 'Tapping' the furnace was also 'a strenuous encounter with a potent and deadly enemy'.²⁸ The heat was immense: accounts of tapping elsewhere in Britain mention the 'half-roasted appearance of the faces of the men involved'.²⁹

What really set the furnace men apart, however, were their hours of work. Details of working hours in the iron mines are not available, but given the nature of the job it seems probable that work was confined to daylight hours.³⁰ The furnaces were different. In contrast to quarrying,

The process of iron making is continuous, the charging into the furnace of the raw materials and fuel, the blowing in of air, the drawing off of slag and iron, proceeding day and night, weekdays and Sundays, until the lining of the furnace is worn out. It is not uncommon for a furnace to be in blast for over 12 years with only one or two days' interruption per year for cleaning flues, and necessary repairs to machinery'.³¹

In the early 1880s the north Lincolnshire iron industry operated on two 12 hour shifts, seven days a week. (This was the standard all over Britain until the Cumberland and Lancashire iron workers won an eight hour day several years later. The eight hour day did not reach Lincolnshire until after 1900.³²) The first week a man worked six day shifts, with a 24 hour break on Sunday. The next week he would do eight night shifts with a 'long turn' of 24 hours on the Sunday to allow the change from shift to shift to be made. The average working week was 84 hours. Because of the continuous nature of furnace operation breaks were short and intermittent. A man was not usually

allowed to leave his post until the arrival of the man who changed shifts with him. Furthermore, the blast furnaces were operated every day of the year, including public holidays.³³

The effects of such hours and conditions were draconian. One union leader from another district declared that

‘Everyone knows what a blastfurnaceman gets like after 10 or 12 years’ work; he seems to get prematurely old more in that employment than in any other that I know of’.³⁴

And William Snow, the General Secretary of the National Association of Blast-Furnacemen, told a public meeting in Scunthorpe in 1891 that

‘There is no other trade where men are working under the same disadvantages as you do. Rain, snow or blow you have to work, the furnace must go, and you have to work harder than men do at other trades, and still get less pay’.³⁵

A year later, Snow described the effects of such long hours to the Royal Commission on Labour:

‘We think the hours are far too long; they are ruinous to the health of the men; they have a demoralising effect upon them on account of their having no time to read, no time to think, no time to have any recreation; it is simply a life of work, eating, sleeping and drinking; that is about all that a blast-furnaceman has to do’.³⁶

In part, this dichotomy between the way of life of the two groups of iron men is reflected in the statistical evidence. Patterns of co-residence afford some tentative support. Of the 152 households which contained more than one positively identified manual iron employee in 1881, only one-fifth contained men from both the mines and the iron works.³⁷ More ambivalent is the evidence on life-cycle patterns of employment shown in Figure 6.1. This Figure has to use cross-sectional data in the absence of cohort information and, furthermore, it is impossible to isolate the influence of in-migration from

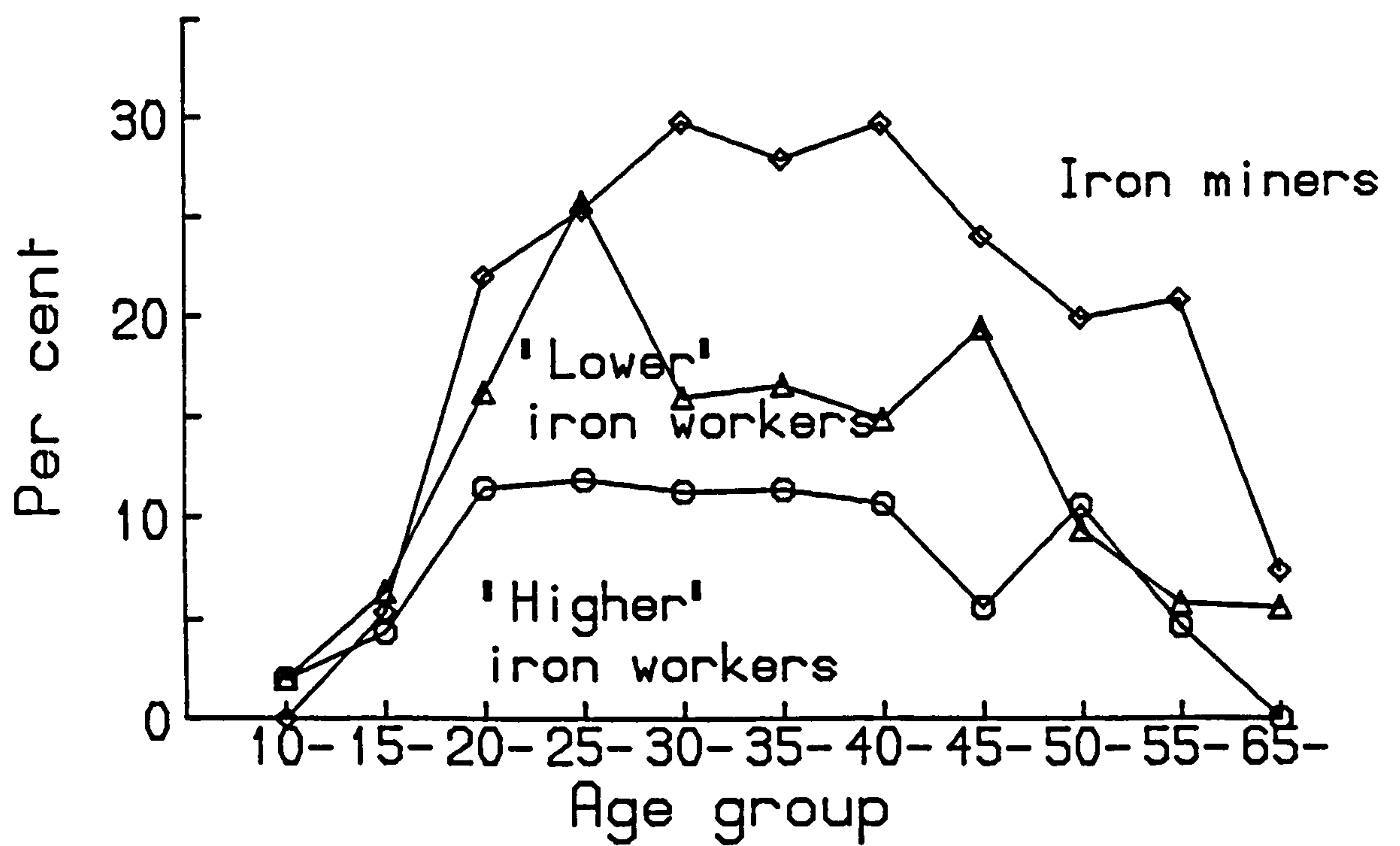


Figure 6.1

Labour force participation rates of males in selected occupational groups, four Scunthorpe district study townships, 1881.

Source: CEBs, 1881.

TABLE 6.1 **COMPARISON OF OCCUPATIONS AT TWO CENSUSES., MANUAL
IRON EMPLOYEES SUCCESSFULLY TRACED BACKWARDS WITHIN
THE STUDY AREA TO 1871, FOUR SCUNTHORPE DISTRICT
STUDY TOWNSHIPS, 1881**

<u>1871</u>	<u>1881</u>		
	'Higher' iron worker	'Lower' iron worker	Iron miner
'Higher' iron worker	42.9	8.7	1.8
'Lower' iron worker	19.0	43.5	24.6
Iron miner	4.8	13.0	19.3
'Labourer'	14.3	17.4	29.8
Agriculture	19.0	13.0	17.5
Other	-	4.3	7.0
	(N=21)	(N=23)	(N=57)

Source: C.E.Bs.

genuine age-related occupational mobility. As it stands, Figure 6.1 does suggest

- A movement of men in their twenties from the 'lower' furnace occupations into the quarries

and/or

- Basically similar employment patterns within each group, but with a tendency for 'lower' iron work to be especially popular among young, recent migrants, which in turn reflects the partial avoidance of such work by the rest of the population.

Actual cases of occupational mobility and persistence are shown in Table 6.1. The number of cases is perilously small, and the number of men previously enumerated as plain 'labourer' is large enough to overturn the pattern shown by the other categories, depending upon the true occupations behind such labels. In addition, the bulk (12 out of 14) of miners who were previously 'lower' iron workers carried the problematic title 'labourer at the iron works'. For what it is worth, the Table lends tentative support to an age-related occupational shift: more miners had previously been 'lower' iron workers than vice versa. The rigours of iron smelting probably became harder to bear with increasing age and family commitments.³⁸

* * * * *

Employment in this new industry was clearly not a uniform experience. The nature and organisation of labour in the iron works seems to have been different to that in the mines, and this was more than a question of varying skill requirements. Such differences were reflected in migration patterns.

TABLE 6.2 AVERAGE BIRTHPLACE DISTANCES, ECONOMICALLY ACTIVE
MIGRANT MALES IN SELECTED OCCUPATIONS, FOUR SCUNTHORPE
DISTRICT STUDY TOWNSHIPS, 1881 (CHILDREN EXCLUDED)

	Median (km)	Mean (km)	Standard deviation (km)	(N)
<u>Iron occupations</u>				
Managerial/Clerical	108.4	124.8	96.6	(15)
'Higher' iron workers	32.2	68.1 ^a	73.6	(112)
'Lower' iron workers	28.3	69.1 ^b	75.3	(193)
Iron miners	17.0	39.0 ^c	59.4	(299)
<u>Non-iron occupations</u>				
Agriculture	12.0	21.2 ^d	30.5	(121)
Trade	14.9	38.4	45.7	(71)
Craft	12.2	54.5	91.6	(26)
Railway (outside the iron works)	53.0	60.8	54.0	(13)
Medicine/Education/Clergy	38.2	75.1	80.3	(10)

Source: C.E.Bs.

- Notes:
- 1) A migrant is defined as someone born outside the study district.
 - 2) All those cases with unidentifiable birthplaces are excluded from the analysis.
 - 3) The following pairs of differences are statistically significant by a two-tailed test:

b/c : $t = 4.93$, 490 degrees of freedom, $p < 0.001$

a/c : $t = 4.13$, 409 degrees of freedom, $p < 0.001$

c/d : $t = 3.13$, 418 degrees of freedom, $p < 0.01$

The following difference is not statistically significant:

a/b : $t = 0.11$, 303 degrees of freedom.

2. Patterns of In-Migration

Table 6.2 shows the average life-time migration distances for males in various groups. Analysis has been restricted to those who appear to have moved independently, rather than as dependents. Hence all males recording a relationship of 'child' to a co-resident member of their household are excluded, unless they are the household head.

Marked differences in migration distance are evident. The white-collar iron employees recorded birthplaces much further away than all the other occupational groupings, including that of medicine, education and the church. However, the 'higher' and 'lower' iron workers show almost identical average migration distances, while those who worked in the ironstone quarries exhibited a much shorter migration distance. Indeed, the iron miners were closer in this respect to those who worked on the land than they were to other workers in the iron industry. This point is further emphasized in Table 6.3 and Figure 6.2. Within the iron industry, the most important difference is again that between the 'lower' iron workers and the iron miners. The difference between the 'lower' and 'higher' iron workers is negligible in comparison.

How robust are these findings? There are two possible grounds for doubt.

First, it has been seen that the allocation of the various occupational titles to the groupings given in Chapter 5 (Table 5.4) was rather impressionistic. It might be argued that the category 'lower' iron workers in fact contained many who were really 'higher' iron workers. Or perhaps the former group contained men who were really iron miners. The bulk of the men classified as 'lower' iron workers comprised just two occupational titles. Table 6.4 shows the migration profiles of men enumerated by one of these two titles. There is no significant difference between them. The category 'lower' iron workers is

TABLE 6.3 BIRTHPLACE DISTANCES OF ECONOMICALLY ACTIVE MALES IN
SELECTED OCCUPATIONS, FOUR SCUNTHORPE DISTRICT STUDY
TOWNSHIPS, 1881 (CHILDREN EXCLUDED)

<u>BIRTHPLACE DISTANCE (CUMULATIVE PER CENT)</u>					
	<u>NON-</u> <u>MIGRANT</u>	<u>1-49km</u>	<u>50-99km</u>	<u>>=100km</u>	(N)
<u>Iron occupations</u>					
Managerial/Clerical	5.0	25.0	45.0	100.0	(20)
'Higher' iron workers ^a	7.8	58.2	71.0	100.0	(141)
'Lower' iron workers ^b	5.8	57.0	66.6	100.0	(240)
Iron miners ^c	10.7	80.5	88.4	100.0	(354)
<u>Non-iron occupations</u>					
Agriculture ^d	21.3	90.2	95.1	100.0	(164)
Trade	16.5	76.9	89.0	100.0	(91)
Craft	19.4	77.7	86.0	100.0	(36)
Railway (outside the iron works) -	-	35.3	70.6	100.0	(17)
Medicine/Education/Clergy	-	46.2	53.9	100.0	(13)

Source: C.E.Bs.

- Notes: 1) A migrant is defined as someone born outside the study district.
- 2) County centroids are used to classify those cases for whom only the county of birth is known. Cases with no identifiable county of birth are excluded from the analysis.
- 3) The following pairs of differences are statistically significant by the Kolmogorov-Smirnov two-sample test:

a/c : $p < 0.001$

a/d : $p < 0.001$

b/c : $p < 0.001$

b/d : $p < 0.001$

a/b and c/d are not significant at the 0.05 level.

Figure 6.2

Cumulative frequency distribution of migration distances in selected occupations, males (children excluded), four Scunthorpe district study townships, 1881.

Source: CEBs 1881.

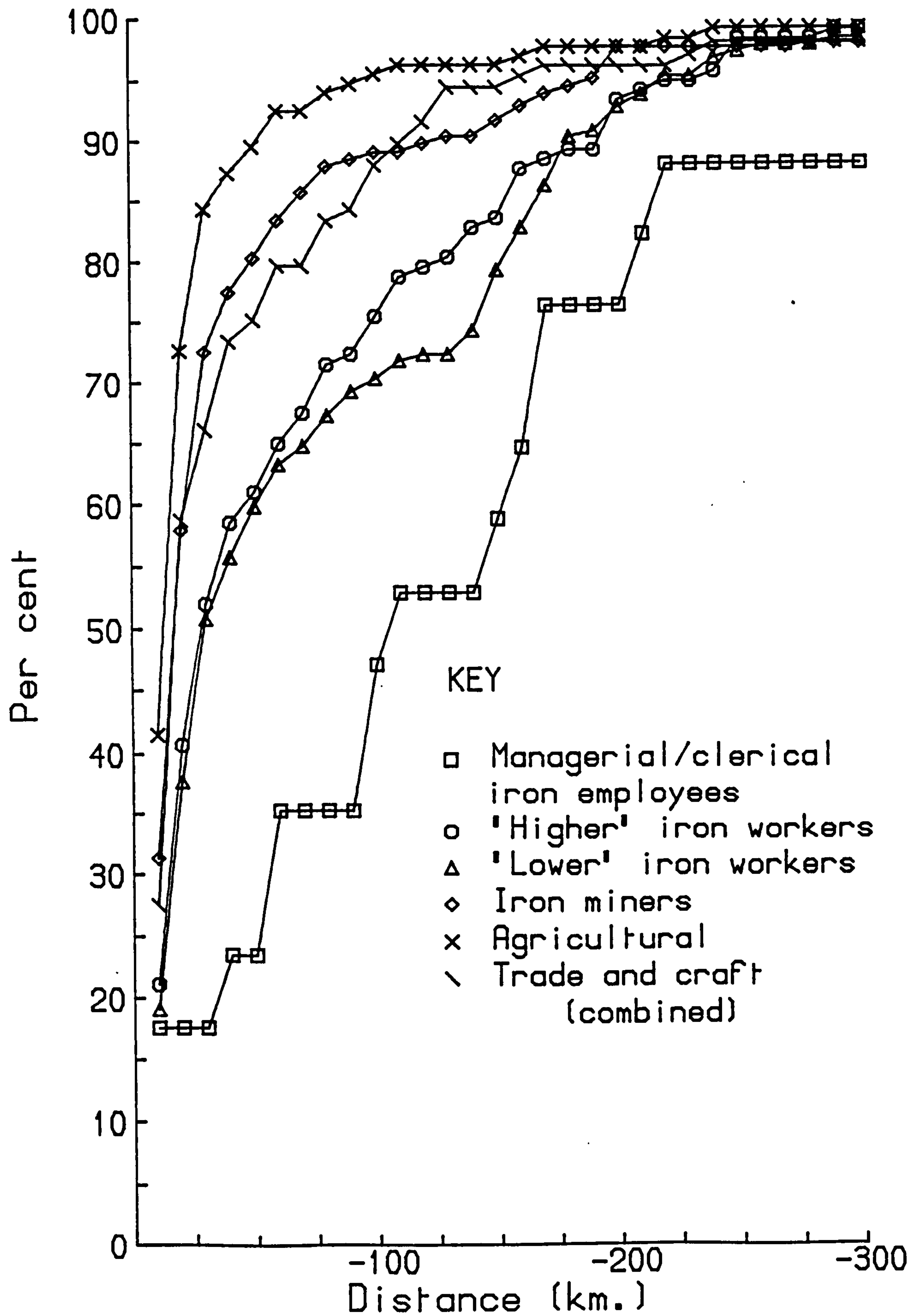


TABLE 6.4 BIRTHPLACE DISTANCES OF ECONOMICALLY ACTIVE MALES
BEARING SELECTED OCCUPATIONAL TITLES, FOUR SCUNTHORPE
DISTRICT STUDY TOWNSHIPS, 1881 (CHILDREN EXCLUDED)

<u>OCCUPATIONAL TITLE</u>	<u>BIRTHPLACE DISTANCE (CUMULATIVE PER CENT)</u>				(N)
	<u>NON- MIGRANT</u>	<u>1-49km</u>	<u>50-99km</u>	<u>≥100km</u>	
'Furnace labourer' ^a	6.0	61.0	67.0	100.0	(100)
'Labourer at the iron works' ^b	4.4	54.8	68.1	100.0	(113)
Iron miners ^c	10.7	80.5	88.4	100.0	(354)

Source: C.E.Bs.

- Notes: 1) A migrant is defined as someone born outside the study district.
- 2) County centroids are used to classify those cases for whom only the county of birth is known. Cases with no identifiable county of birth are excluded from the analysis.
- 3) The following pairs of differences are statistically significant by the Kolmogorov-Smirnov two-sample test:

$$\begin{aligned} a/c &: p < 0.01 \\ b/c &: p < 0.001 \end{aligned}$$

The difference a/b is not significant at the 0.05 level.

internally consistent. The title 'labourer in the iron works' is particularly interesting, as it caused the most concern when allocating jobs to the different groups in chapter 5. Yet it can be seen that these men exhibit as markedly different a migration profile from that of the iron miners as do the 'furnace labourers'. Indeed, as the former label almost certainly covers at least some miners – who were presumably typical of all miners – so the difference between genuine labourers in the iron works and miners is even more pronounced.

Second, the objection can be made that birthplace distances show only life-time movement, it being more relevant to measure migration from the last place of residence. Unfortunately, this can only be done in a crude manner, using the birthplace of the youngest co-resident child who is a migrant as a best-guess at the father's last location. Analysis is of course confined to fathers with such children. The results are given in Table 6.5. Although many of the other classes contain too few cases to be representative (and are only included to preserve consistency between tables), the three manual iron groups show a virtually identical pattern to that in Table 6.3. The data on 'last apparent residence' thus confirm the findings for birthplaces.

Where did the migrants come from? Figures 6.3 (a)–(d) show the spatial distribution of birthplaces outside Lincolnshire for males in selected occupational groups. All children are excluded, irrespective of age. The main impression is of the greater locational specificity of both the 'higher' and the 'lower' iron workers compared with the iron miners and those from outside the industry. To use Redford's terminology, the supply of labour for the Scunthorpe iron works was a case of 'special industrial migration', while that for the quarries was more a case of 'general migration'.³⁹

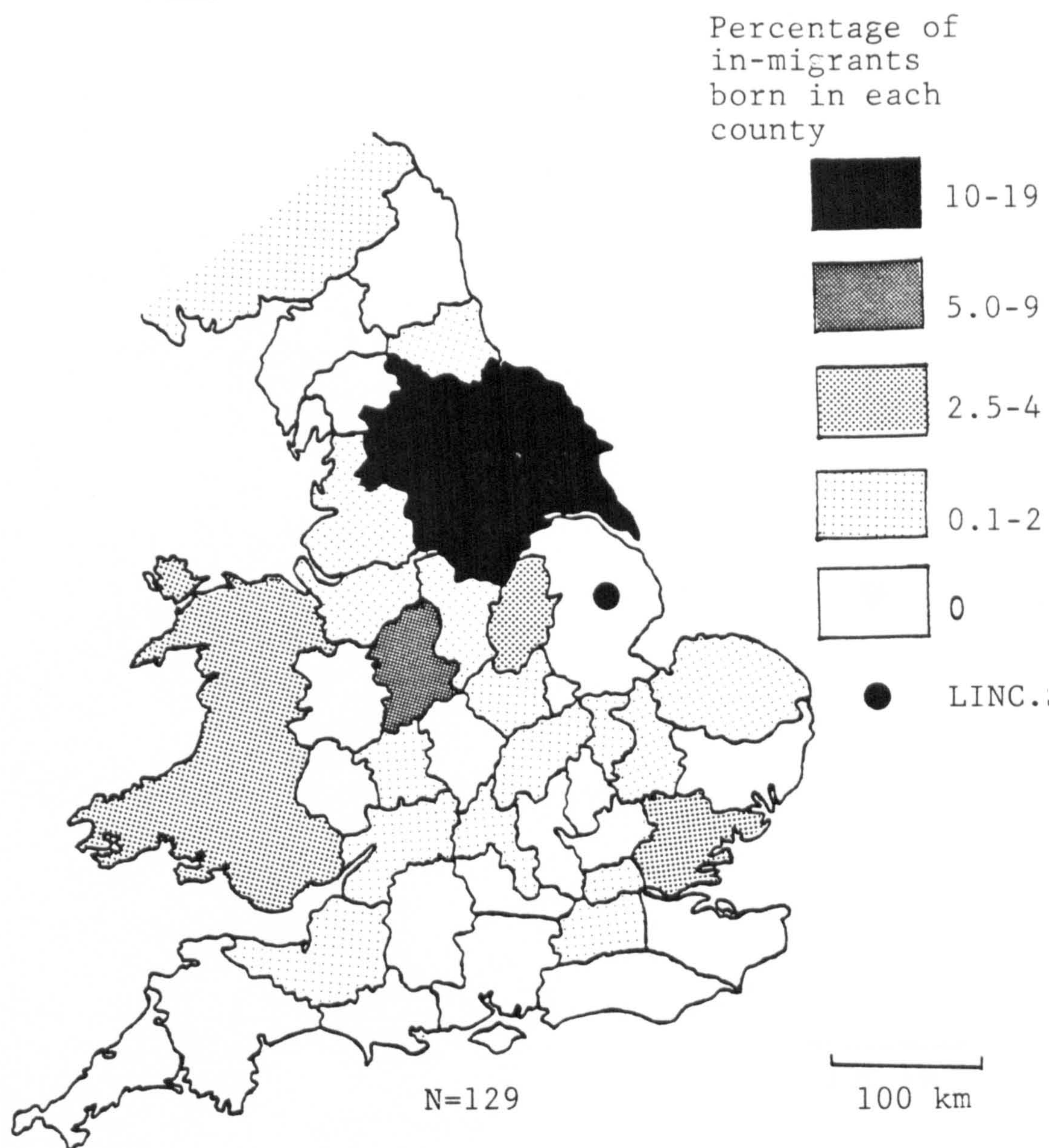
TABLE 6.5 DISTANCE BETWEEN STUDY DISTRICT AND APPARENT LAST PLACE OF RESIDENCE FOR ECONOMICALLY ACTIVE MIGRANT FATHERS WITH CO-RESIDENT MIGRANT CHILDREN, BY SELECTED OCCUPATIONS, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881.

	<u>DISTANCE (CUMULATIVE PER CENT)</u>			
	<u>1-49km</u>	<u>50-99km</u>	<u>≥100km</u>	(N)
<u>Iron occupations</u>				
Management/Clerical	14.3	42.9	100.0	(7)
'Higher' iron workers ^a	56.5	67.4	100.0	(46)
'Lower' iron workers ^b	55.2	64.4	100.0	(87)
Iron miners ^c	76.2	86.2	100.0	(130)
<u>Non-iron occupations</u>				
Agriculture	84.2	94.7	100.0	(38)
Trade	75.9	96.6	100.0	(29)
Craft	87.5	87.5	100.0	(8)
Railway (outside the iron works)	100.0	100.0	100.0	(3)
Medicine/Education/Clergy	42.9	85.8	100.1	(7)

Source: C.E.Bs.

- Notes:
- 1) A migrant is defined as someone born outside the study district.
 - 2) County centroids are used to classify those cases for whom only county of last residence is known. Cases with no identifiable county of last residence are excluded from the analysis.
 - 3) Cases where the youngest co-resident migrant child was aged 20 years or older are excluded from the analysis to preserve accuracy.
 - 4) The Kolmogorov-Smirnov two-sample test shows the difference b/c is statistically significant ($p < 0.05$); the differences a/b and a/c are not significant at this level.

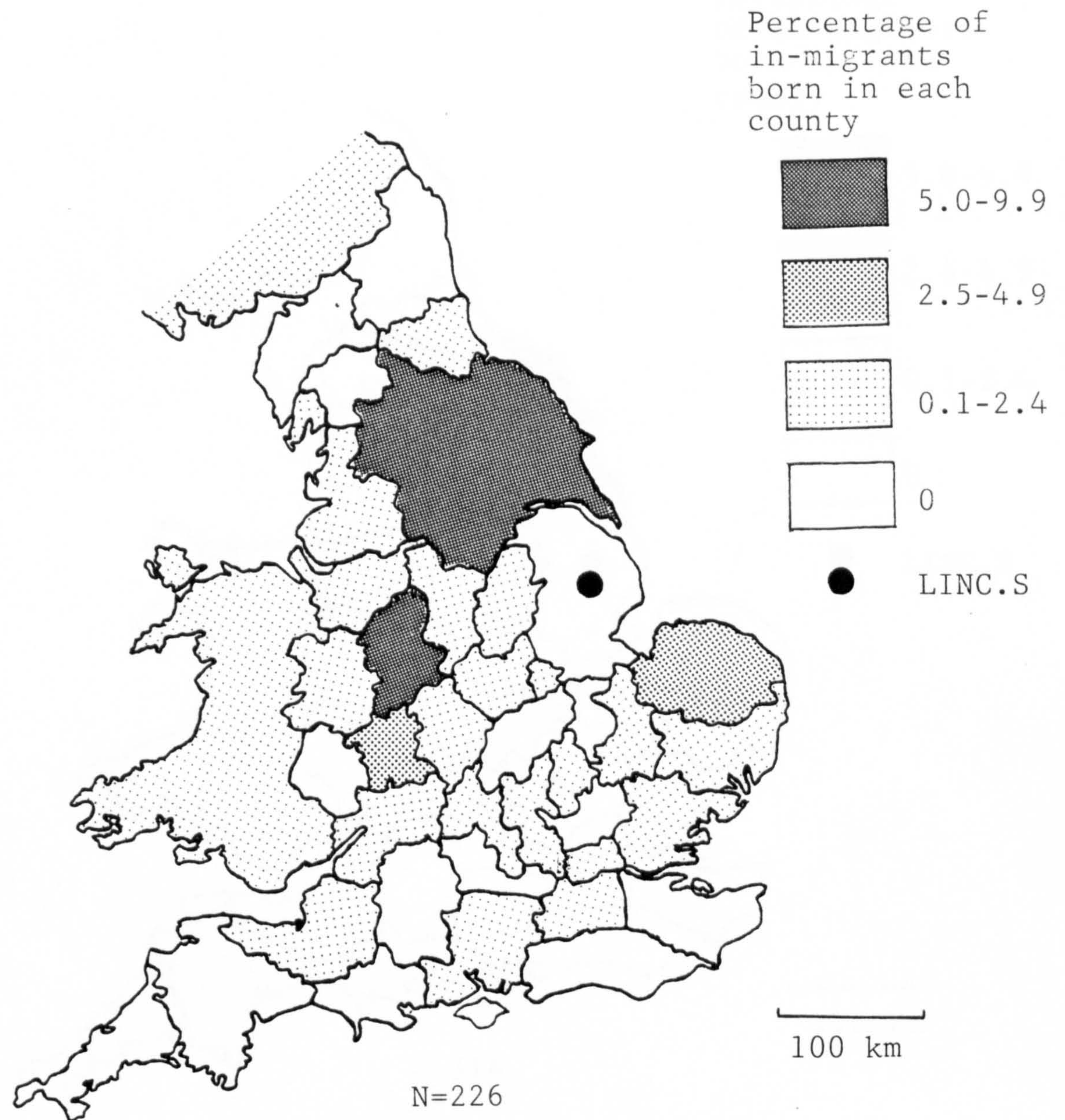
Figure 6.3 (a)



- Birthplace of male 'higher' iron workers (children excluded), Lincolnshire not shown, four Scunthorpe district study townships, 1881.

Source: C.E.Bs

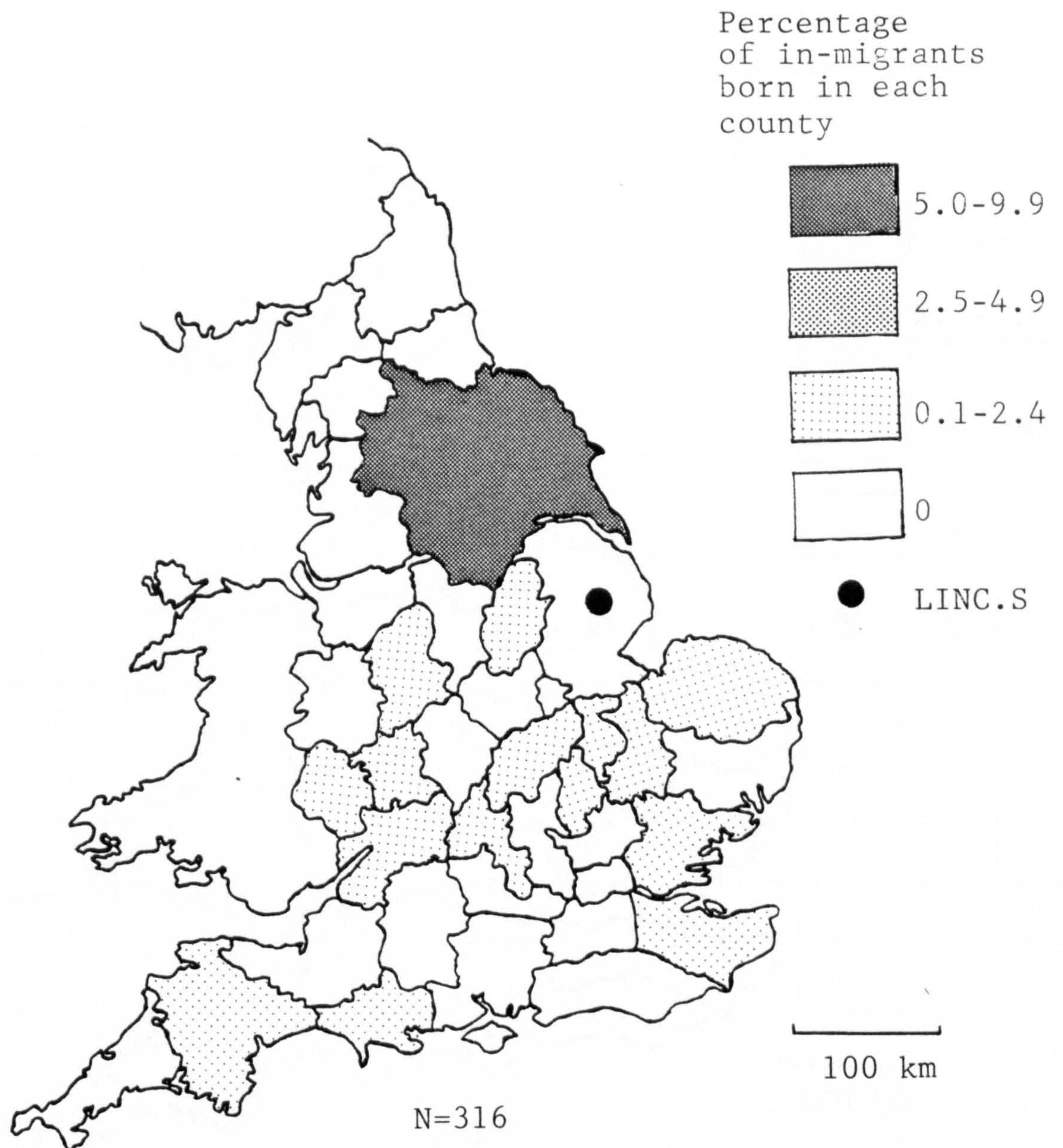
Figure 6.3 (b)



Birthplace of male 'lower' iron workers
(children excluded), Lincolnshire not shown,
four Scunthorpe district study townships, 1881.

Source: C.E.B.s

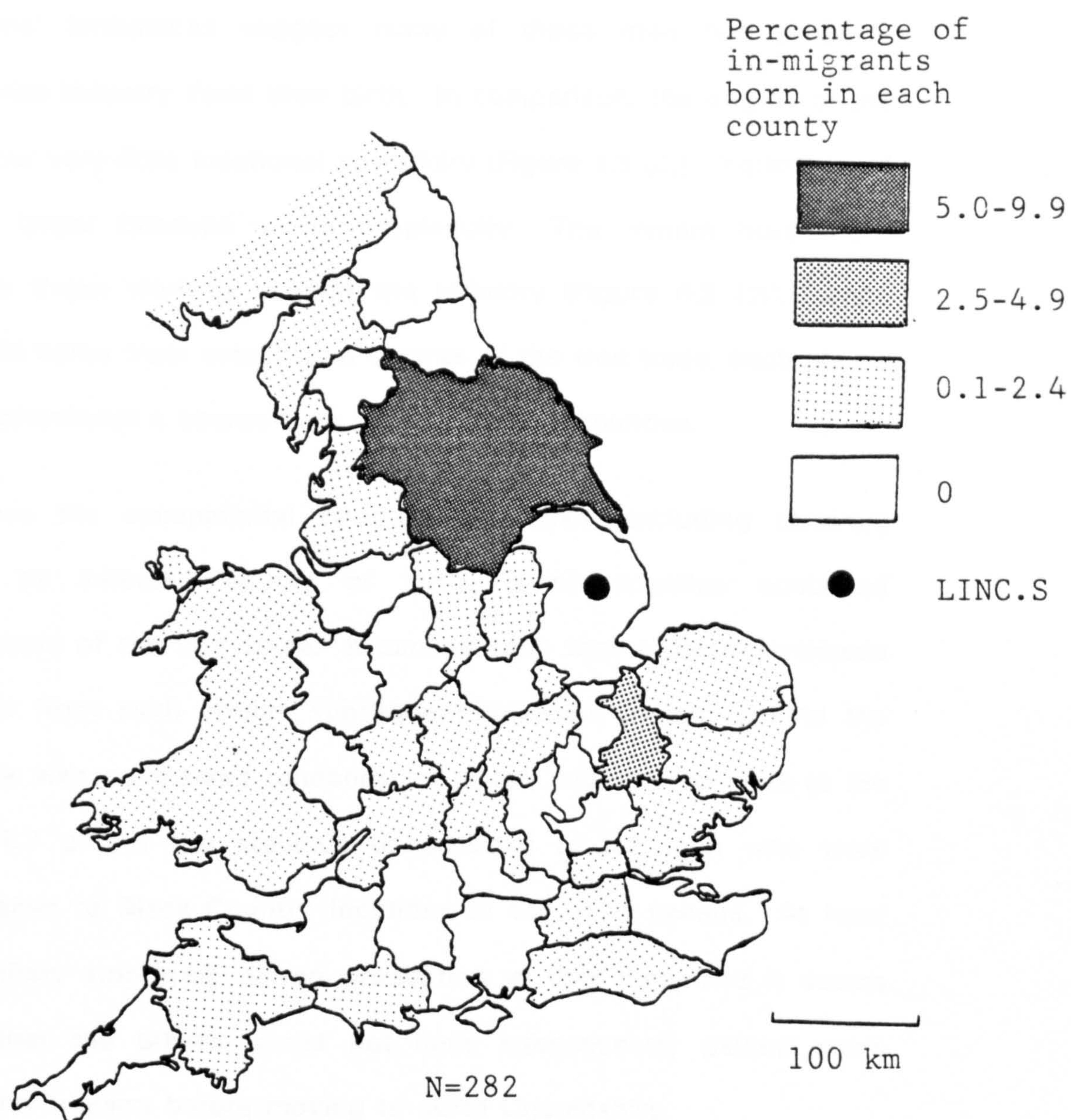
Figure 6.3 (c)



Birthplace of male iron miners
(children excluded), Lincolnshire not
shown, four Scunthorpe district
study townships, 1881.

Source: C.E.B.s

Figure 6.3 (d)



Birthplace of males unequivocally identified as employed outside the iron industry (children excluded), Lincolnshire not shown, four Scunthorpe district study townships, 1881.

Source: C.E.B.s

Existing centres of the iron industry in Yorkshire, the Black Country and Wales were important sources of labour for the early smelting works (Figures 6.3 (a) and (b)). Other iron workers were born in counties with no such connection, though childrens' birthplaces suggest many of these men had probably worked in the iron industry since their birth. In comparison, the origins of the iron miners show very little locational specificity (Figure 6.3 (c)). Yorkshire, of course, looms larger because of its propinquity. The miners bore more resemblance to those working outside the industry (Figure 6.3 (d)). While some miners did come from established centres of the iron trade, such places were no more prominent a source than other, non-iron counties.

Table 6.6 shows the occupational structure of males (excluding children) broken down by selected county of birth. These counties contained established centres of the iron trade. It can be seen that a disproportionate number of men from such origins subsequently worked in and around the furnaces. There was no marked tendency for these migrants to work in the mines. Table 6.7 shows the previous occupations of ten men who were successfully traced to Black Country locations in the 1871 census. At least half were definitely employed in iron production at that time, and it seems very unlikely that the others would not have subsequently gained some experience of the industry before moving to north Lincolnshire.

Taken together, the evidence on migration distance and spatial origins suggests that although skill was of some importance in shaping migration patterns, the sphere of work was, if anything, even more important. In general, if levels of skill were the main determinant of migration patterns, we would expect to find the iron miners and 'higher' iron workers at opposite extremes, with the 'lower' iron workers somewhere between the two. As it is, the largest difference is that between the iron miners and those employed in smelting as a whole. The difference between the two classes of furnace

TABLE 6.6 OCCUPATIONS OF MALES BORN IN DIFFERENT COUNTIES, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881 (CHILDREN EXCLUDED)

	<u>Selected iron counties</u>				<u>All iron counties</u> (%)	<u>All other counties outside Lincolnshire</u> (%)
	Staffs	Worcs	Yorks	Lancs	Durham	
<u>Iron occupations</u>						
Iron Master	1	-	2	-	-	-
Managerial/Clerical	1	-	5	1	-	2.1
'Higher' iron workers	4	1	13	3	2	14.1
'Lower' iron workers	23	13	22	3	-	21.4
Iron miner	2	4	21	-	-	21.9
	12	8	43	4	-	40.6
<u>Other</u>	<u>43</u>	<u>26</u>	<u>106</u>	<u>11</u>	<u>2</u>	<u>100.1</u>
					(N=223)	(N=192)

Source: C.E.Bs.

- Notes: 1) 'All iron counties' are those which contained centres of the iron industry: Shropshire, Staffordshire, Worcestershire, Derbyshire, Lancashire, Yorkshire, Durham, Northumberland and Cumberland, and Wales and Scotland.
- 2) The occupational category 'others' includes some cases who possibly worked in the industry but cannot be positively identified as so employed - Group 'B' in Table 5.3

TABLE 6.7 COMPARISON OF OCCUPATIONAL TITLES IN 1881 AND 1871
CENSUSES; TEN MALES SUCCESSFULLY TRACED BACKWARDS
TO STAFFORDSHIRE AND WORCESTERSHIRE LOCATIONS IN 1871.

Four Scunthorpe district study
townships, 1881

Blast Furnace Labourer
Furnace Labourer
Furnace Labourer
Furnace Labourer
Furnace Man
Furnace Man
Iron Worker
Labourer
Labourer at the Iron Works
Pig Iron Carrier

Staffordshire & Worcestershire
locations, 1871

Gun Lock Filer
Iron Labourer
Labourer
Farmer's Boy
Tinner in Iron Foundry
Agricultural Labourer
Agricultural Labourer
Coal Miner
Stock Maker (iron worker)
Mill Labourer in the Iron
Works

Source: C.E.Bs.

worker is either non-existent or slight, depending on what is being measured. If differential levels of expertise are insufficient an explanation, what else could be at work here? I would suggest that the answer lies in the contrast between the life of a furnace worker and that of most other Victorian workers. For those whose experience hitherto lay outside the iron industry, the life of a furnace worker would seem far more alien than that of a quarryman. This must have especially been the case for those who had previously worked in agriculture.

Table 6.8 (a) shows the proportion of iron miners born in rural communities⁴⁰ to have been significantly greater than the proportion of iron workers who were so born. Indeed, the iron miners were closer in this regard to those still employed on the land than they were to the 'lower' iron workers. The difference between the 'higher' and 'lower' iron workers appears to contradict this hypothesis until it is remembered that the origins of the former tended to be rather more concentrated in other iron centres, which, by definition, tend to be urban.

These results are partly a function of differential life-time migration distances: the further away the origin, the more likely it is to be urban. Table 6.8 (b) qualifies the picture as the relationship only appears to hold good for those from longer distances. (The whole exercise is repeated in Tables 6.9 (a) and (b), using the last apparent residence of fathers with migrant children instead of birthplaces. A similar picture is obtained, although the small number of cases renders some categories invalid.)

Quarry work was certainly an easy transition from farm work. The hours were probably similar. Excavating stone had much in common with agricultural labour, both being outdoor, heavy manual work.

The work was hard and laborious, but healthy, and proved

TABLE 6.8 (a) ECONOMICALLY ACTIVE MIGRANT MALES BORN IN RURAL COMMUNITIES BY SELECTED OCCUPATIONS, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881 (CHILDREN EXCLUDED)

	<u>Rural birthplace</u> %	(N)
<u>Iron occupations</u>		
Management/Clerical	46.7	(15)
'Higher' iron workers ^a	61.6	(112)
'Lower' iron workers ^b	77.2	(193)
Iron miners ^c	89.0	(299)
<u>Non-iron occupations</u>		
Agriculture ^d	92.6	(121)
Trade	80.3	(71)
Craft	76.9	(26)
Railway (outside the iron works)	69.2	(13)
Medicine/Education/Clergy	50.0	(10)

Source: C.E.Bs.

- Notes: 1) A migrant is defined as someone born outside the study district.
- 2) Those cases with no identifiable community of birth were excluded from the analysis.
- 3) The following pairs of differences are statistically significant:
- a/b : $\chi^2 = 8.45$, 1 degree of freedom, $p < 0.01$
- b/c : $\chi^2 = 12.28$, 1 degree of freedom, $p < 0.001$
- The difference c/d is not statistically significant:
- $\chi^2 = 1.24$, 1 degree of freedom.

TABLE 6.8 (b) ECONOMICALLY ACTIVE MIGRANT MALES BORN IN RURAL COMMUNITIES BY BIRTHPLACE DISTANCE AND BY SELECTED OCCUPATIONS, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881 (CHILDREN EXCLUDED)

<u>Birthplace</u> <u>Distance (km)</u>	<u>Rural birthplace</u> <u>%</u>	(N)
<u>1 - 49 km</u>		
'Higher' iron workers ^a	76.9	(65)
'Lower' iron workers ^b	91.4	(116)
Iron miners ^c	90.8	(239)
<u>50 - 99 km</u>		
'Higher' iron workers ^d	27.8	(18)
'Lower' iron workers ^e	66.7	(21)
Iron Miners ^f	85.7	(28)
<u>> =100 km</u>		
'Higher' iron workers ^g	48.3	(29)
'Lower' iron workers ^h	51.8	(56)
Iron Miners ⁱ	78.1	(32)

Source: C.E.Bs.

- Notes: 1) Cases with no identifiable community of birth were excluded from the analysis.
- 2) The following pairs of differences are statistically significant:

$$\begin{aligned}
 a/b : \chi^2_2 &= 7.31, p < 0.01 \\
 a/c : \chi^2_2 &= 9.20, p < 0.01 \\
 d/e : \chi^2_2 &= 4.35, p < 0.05 \\
 d/f : \chi^2_2 &= 15.80, p < 0.001 \\
 g/i : \chi^2_2 &= 5.88, p < 0.02 \\
 h/i : \chi^2_2 &= 5.95, p < 0.02
 \end{aligned}$$

The following pairs of differences are not statistically significant:

$$\begin{aligned}
 b/c : \chi^2_2 &= 0.01 \\
 e/f : \chi^2_2 &= 1.53* \\
 g/h : \chi^2_2 &= 0.09
 \end{aligned}$$

All with 1 degree of freedom.

*Corrected for continuity because expected cell frequencies 5 or below.

TABLE 6.9 (a) LAST APPARENT PLACE OF RESIDENCE OF ECONOMICALLY ACTIVE MIGRANT FATHERS WITH CO-RESIDENT MIGRANT CHILDREN, BY SELECTED OCCUPATIONS, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881.

	<u>Rural community</u> %	(N)
<u>Iron occupations</u>		
Managerial/Clerical	40.0	(5)
'Higher' iron workers ^a	55.0	(40)
'Lower' iron workers ^c	70.8	(65)
Iron miners	82.2	(118)
<u>Non-iron occupations</u>		
Agriculture ^d	81.8	(33)
Trade	63.0	(27)
Craft	62.5	(8)
Railway (outside the iron works)	33.3	(3)
Medicine/Education/Clergy	66.7	(3)

Source: C.E.Bs.

- Notes:
- 1) A migrant is defined as someone born outside the study district.
 - 2) All cases where either father or youngest co-resident migrant child has no identifiable birthplace are excluded from the analysis.
 - 3) Cases where the youngest co-resident migrant child was aged 20 years or older are excluded from the analysis to preserve accuracy.
 - 4) The following pairs of differences are statistically significant:
 - a/b : $\chi^2_2 = 2.69$, 1 degree of freedom, $p < 0.20$
 - b/c : $\chi^2_2 = 3.20$, 1 degree of freedom, $p < 0.10$
 - a/c : $\chi^2_2 = 11.90$, 1 degree of freedom, $p < 0.001$
 - a/d : $\chi^2_2 = 5.89$, 1 degree of freedom, $p < 0.02$

The differences b/d and c/d are not significant:
 $\chi^2_2 = 1.41$ and 0.00 respectively, with 1 degree of freedom.

TABLE 6.9 (b) LAST APPARENT PLACE OF RESIDENCE OF ECONOMICALLY ACTIVE MIGRANT FATHERS WITH CO-RESIDENT MIGRANT CHILDREN, BY MANUAL IRON OCCUPATIONS AND BY DISTANCE FROM THE STUDY DISTRICT, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881.

<u>Distance from study district</u>	<u>Rural communities</u> %	(N)
<u>1 - 49 km</u>		
'Higher' iron workers ^a	70.8	(24)
'Lower' iron workers ^c	91.7	(36)
Iron miners	87.9	(91)
<u>50 - 99 km</u>		
(Too few cases to permit meaningful results)		
<u>>=100 km</u>		
'Higher' iron workers ^d	30.0	(10)
'Lower' iron workers ^f	36.8	(19)
Iron miners ⁱ	90.9	(11)

Source: C.E.Bs.

- Notes: 1) A migrant is defined as someone born outside the study district.
- 2) All cases where either father or youngest co-resident migrant child has no identifiable birthplace are excluded from the analysis.
- 3) Cases where the youngest co-resident migrant child was aged 20 years or older are excluded from the analysis to preserve accuracy.
- 4) The following pairs of differences are statistically significant:
- a/b : $\chi^2_2 = 3.12$, 1 degree of freedom, $p < 0.10$
- a/c : $\chi^2_2 = 2.99$, 1 degree of freedom, $p < 0.10$
- e/g : $\chi^2_2 = 5.86$, 1 degree of freedom, $p < 0.02$
- f/g : $\chi^2 = 6.25$, 1 degree of freedom, $p < 0.02$

The following pairs of differences are not statistically significant:

b/c : $\chi^2_2 = 0.09$, 1 degree of freedom

e/f : $\chi^2 = 0.00$, 1 degree of freedom

(All values of chi-square are corrected for continuity owing to some expected values being 5 or less.)

very attractive to the agricultural workers who flocked to the district and soon filled the demand for strong and willing men'.⁴¹

Furthermore, there may well have been fluidity of movement between employment in agriculture and in the iron mines. As demand for labour fluctuated in either sector, so there may have been movement of individuals between iron and the land. One local historian has suggested that

'It would therefore not be surprising to find some sort of movement backwards and forwards between the ironstone mining workforce and the agricultural labourers of the area. The seasonal demands of farm work might mean, for example, that men would be tempted to leave the ironstone fields for harvest work. Similarly, agricultural workers might seek work mining ironstone at those periods of year when farm work was less easy to obtain'.⁴²

The 1881 census records three men following the dual occupation of 'iron miner and agricultural labourer'. No other type of iron employee was so enumerated.

In comparison, the world of the iron worker must have seemed far removed from life in agriculture. The conditions and nature of the work, the long hours, the shift system, the continual operation of the furnaces – all contrasted sharply with work on the farm. Lady Bell's description of an iron works at the turn of the century captures this contrast:

'The world of the iron works is one in which there are constant suggestions of the ordinary operations of life raised to some strange, monstrous power, in which the land runs, not with water, but with fire, where the labourer leaning on his spade is going to dig, not in fresh, moist earth, but in a channel of molten flame; where instead of stacking the crops, he stacks iron too hot for him to handle; where the tools laid out for his use are huge iron bars 10 feet long or more, taking several men to wield them'.⁴³

This is not to say that many agricultural labourers did not obtain work in the furnaces. A great many did. During a dispute in the local iron industry in

1873, it was reported that the companies were going to break the strike by 'the employing of a large number of agricultural labourers at the furnaces, and in the raising of the ore', and local union leaders faced a similar problem in the strike of 1909.⁴⁴ Many jobs in and around the furnaces were quite accessible to those who moved in off the land. Indeed, of 26 migrant 'lower' iron workers traced to their previous residences in Lincolnshire, Yorkshire, Nottinghamshire and Derbyshire⁴⁵, 65.4% were engaged in agriculture. This compares with 79.1% of iron miners who were so traced (N=67).⁴⁶ Rather, it is suggested here that quarry work had more in common with farm labour than had furnace labouring and was therefore the preference of most of those who moved in off the land.⁴⁷

3. The Recruitment of Labour

From the very beginning, the north Lincolnshire iron industry had connections with other iron districts.⁴⁸ These economic links were reflected in patterns of labour recruitment. Many of the white-collar and managerial staff, for example, were brought in from existing iron centres. They included Thomas Walshaw, the son of a farmer in the Cleveland district. In 1868 he began work there as a clerk at the Glaisdale Iron Works. When these works closed down in 1875, he moved to the post of cashier in the Frodingham Iron Works, being promoted to blast furnace manager in 1880.⁴⁹

Such places were also important sources of skilled – and not so skilled – iron workers (Figures 6.3 (a) and (b)). In 1869, for example, the manager of the North Lincolnshire Works travelled all the way to Scotland for men.⁵⁰ Such recruitment had long been the norm in the industry:

'The skilled men, who could form a nucleus to train raw labour to the operations of the furnace and forge, were throughout the Industrial Revolution brought by the ironmasters from the old-established works'.⁵¹

Long-distance, 'special industrial migration' (to use Redford's phrase), was, by this time, well-established in the industry. South Wales, the Black Country, Barrow and, most recently, Middlesbrough had all attracted labour from afar. In 1871 only half the population of Middlesbrough were natives of Yorkshire.⁵² This behaviour might almost be seen as a cultural trait of iron workers: such movement appears to have been less prevalent in, say, the early nineteenth-century textile industry.⁵³

Some iron workers indeed showed a ready willingness to simply down tools and move. In 1891 a former manager of the Appleby Iron Works recruited 30 men for the Langloan works at Coatbridge in Scotland where he was now employed. He began recruiting on Tuesday, 7 April: the men left for Scotland on the noon train the very next day.⁵⁴ Some returned, apparently disillusioned at finding they were breaking a strike, but others stayed:

'We are forming a respectable English colony here, and I for one mean to stay, as good workmen are better paid here than at Frodingham'.⁵⁵

The pattern of movement between different iron centres can be explored in more detail using information on the birthplaces of children. Of 46 men born in Staffordshire and Worcestershire who had at least one co-residing child, 32 appear to have moved directly to the Scunthorpe district. Of the remainder, seven had previously moved between Staffordshire and Worcestershire. The remaining seven had lived in other counties before subsequently moving to north Lincolnshire: four in Yorkshire, two in Lancashire (Barrow), and one in Durham: all iron counties. Most of these men were furnace workers.⁵⁶ Two points of interest arise from these figures.

First, although there was an influx of highly mobile iron workers, for most of these families Scunthorpe was their first recorded long-distance move. Possibly these people were less prone to mobility than their atypical compatriots, being persuaded to move through a combination of positive recruitment by the iron companies and the contraction of the Black Country iron industry in the 1870s.⁵⁷ It is also feasible that the more migration-prone of the iron population felt a greater attraction to other destinations. The Cleveland district had recently mushroomed into existence, as had the massive iron and steel centre of Barrow.⁵⁸ Both were far larger magnets than Scunthorpe.

Second, within the more highly mobile subset, the highly skilled appear to be a minority or even non-existent. Of the 14 such men, only two were 'higher' iron workers and these were both the rather ambiguous 'furnaceman'. Eight were 'lower' furnace workers. Long-distance mobility was not exclusive to the highly skilled.

This last point is most aptly illustrated, however, in the case of the iron miners. This work also attracted men from very long distances, despite its compatibility with local farm labour (Figure 6.3 (c)).⁵⁹ Over one in ten of the iron miners were born 100 kilometres away or more (Table 6.3). The early iron masters saturated the local labour supply, and had to look beyond the north Lincolnshire countryside even for these men. One manager recalled that

There were difficulties in the early days of obtaining sufficient labour of a suitable type; and after local supplies were exhausted, recruiting in other districts, even as far off as Devon and Essex, had to be resorted to'.⁶⁰

These two counties were indeed notable among long-distance sources of labour, and are worth exploring in more detail.

Figure 6.3 (c) showed the origins of the unskilled miners were not industrially specific, and that some of the 'higher' and 'lower' iron workers also came from counties not directly associated with the iron trade. But the origins of these men and their families were nevertheless highly localised. The long-distance migrants tended to come from just a small area within their county of origin. Nearly all the 54 Essex-born migrants came from a group of rural settlements in an area of ten kilometres centred on the village of Great Sampford. The origins of the Devon migrants were similarly concentrated on a rural area of less than 25 kilometres diameter in the south of the county.

These migrants worked mainly in the lower sector of the iron works or in the mines. Of the 21 males (excluding children) born in Essex, seven were iron miners and nine were enumerated in 'lower' iron working occupations – mainly 'blast furnace men'. There was also a locomotive engine driver, probably employed in the iron works, and one man of only 28 had managed to become a blast furnace keeper. The Devonshire men consisted of three iron miners and four general labourers who probably worked in the iron industry. These all came from rural communities. In addition, a platelayer in the iron works came from Exeter, as did a self-employed painter.

Thirteen of the fifteen men (excluding children) born in the villages of Great and Little Sampford in Essex have been successfully located there in the 1871 census. These six iron miners, four blast furnace labourers, one engine cleaner and a general labourer were all previously agricultural labourers, except one man who was still at school. Five of the seven rural-born Devon men were similarly located. One had been employed as a tanner's labourer, another as a brickmaker's labourer, and the other three were farm workers.

Moreover, the evidence suggests that migration was direct. Of eleven Essex families with co-resident children, ten contained no children born at any

intermediate location between the Great Sampford region and the Scunthorpe district. The one exception appears to have moved childless to West Bromwich in Worcestershire before then moving to Lincolnshire. Perhaps these Essex villages were a source of labour for other centres of the iron industry as well. The Devon families also appear to have made a straight move. With but one exception, then, these families had no experience of the iron industry before moving to north Lincolnshire.

Did these people move together, or was there a slower 'chain' migration of people to the Scunthorpe district? In the case of those from the Great Sampford region of Essex, the timing of migration can be approximated for nine families using age and birthplace information of co-resident children. Although one family was still living in Essex in 1876, this was an error or an exception, for it is clear that the rest of these families made the move within an extremely short period of time in about 1873. Four of the five available cases from Devon also show a bunching of movement in the early to mid-1870s. The bulk of the unskilled workers from these two counties were recruited in a period of rapid growth in the local iron industry. Most appear to have been enlisted en masse to fill specific gaps in the local labour market.

These migrants were unlikely to move without an adequate assurance that housing was available. It is interesting that of the thirteen household heads in the district who originated from the Great Sampford locality in Essex, no fewer than twelve were living in the purpose-built settlement of 'New Frodingham'. This housing usually went with a job in the iron works or quarries.⁶¹

It is clear that these long-distance migrants moved to fill vacancies and houses they knew to exist. There was no blind drifting from one place to another in search of work, but a highly organised and informed undertaking.

Exactly how Essex and Devonshire farm workers found out about such opportunities is unclear. Perhaps a recruiting agent of some kind toured the area, or, more likely, a newspaper article or advertisement prompted them to make enquiries. Whoever made the initial move, the companies or the recruits, given that Victorian labour recruitment relied heavily on networks of kin and friends, it would only require initial contact with one person to set up an informal recruitment chain.⁶² This would explain the highly localised sources of such long-distance labour.

Why these villagers were attracted to the Scunthorpe district is equally uncertain. There were many alternative destinations nearer to hand where higher wages could be had. Perhaps the semi-rural nature of work in the north Lincolnshire iron industry was more attractive than an urban existence, especially in London – the most common destination for migrants from rural Essex.⁶³ More probably, the promise of a firm job was enough to offset the long journey and the isolation from home, friends and kin.

The picture is no clearer when we turn to labour recruitment from more local sources. Much job information would have been passed on informally through friends and relatives already living in the iron villages. A clerk in the North Lincolnshire Works, John Green, regularly noted in his diary the dates of the local statute hiring fairs. These events were primarily for the recruitment of agricultural servants, but it is possible that officials like Green used such events to take on men. He also records visiting the nearby market town of Brigg to recruit bricklayers to help build the furnaces in August 1867.⁶⁴

This specific recruitment of labour is reflected in a high degree of direct movement into the area. Few men, having been offered a job, moved to the Scunthorpe district in steps. The Devon and Essex migrants were not alone in this respect. Table 6.10 shows the incidence of this direct movement for

the different occupational groups. Column (a) compares the birthplaces of migrant males in the district with those of their youngest co-resident child under twenty who was also born outside the district. The method is obviously crude and analysis is restricted to fathers who had children before they moved into the area. It distorts the true amount of simple step migration because not every stop will result in additional offspring. Variation in family size cannot be allowed for. Nevertheless, the method is a useful proxy in the absence of more accurate data, and the point of interest is the relative behaviour of the different groups.

An intermediate location is defined as any identifiable place (irrespective of its geographical position) outside the four study townships and over two kilometres from the birthplace of the father.

At first sight, there appears to have been quite a high level of simple step migration into the district. This is an artefact of the method, for much – probably most – of these intermediate stops would have occurred long before the individual decided to move to the area. These figures are not absolute measures of step migration. What is clear, however, is the relatively lower incidence of intermediate residence among all the manual iron men compared with those outside the industry. To some extent, this is the influence of differential migration distances. Anderson found that in Preston, Lancashire, in 1851, the greater the migration distance covered by the father, the more likely it was that the eldest child would be born at an intermediate location.⁶⁵ Unfortunately, the number of cases in column (a) of Table 6.10 is too small to bear much breaking down. Column (b) of the Table therefore presents the same information, just excluding those fathers born in Lincolnshire. Intermediate Lincolnshire locations are still included. Most cells contain too few cases to have any real meaning, and the iron men only differ from the others at a low level of statistical significance (0.10). Nevertheless, the

TABLE 6.10

STEP-MIGRATION OF ECONOMICALLY ACTIVE MIGRANT FATHERS
IN SELECTED OCCUPATIONS AND WITH CO-RESIDENT MIGRANT
CHILDREN, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS,
1881

	<u>% with youngest migrant child born in an intermediate location</u>	
	All migrant fathers (a)	Fathers born outside Lincolnshire (b)
<u>Iron occupations</u>		
Managerial/Clerical	100.0 (N = 5)	100.0 (N = 5)
'Higher' iron workers	67.5 (N = 40)	57.1 (N = 14)
'Lower' iron workers	70.8 (N = 65)	69.0 (N = 29)
Iron miners	66.1 (N = 118)	70.8 (N = 24)
<u>Non-iron occupations</u>		
Agriculture	78.8 (N = 33)	100.0 (N = 4)
Trade	85.2 (N = 27)	80.0 (N = 10)
Craft	75.0 (N = 8)	100.0 (N = 2)
Railway (outside the iron works)	100.0 (N = 3)	100.0 (N = 1)
Medicine/Education/Clergy	100.0 (N = 3)	100.0 (N = 2)

Source: C.E.Bs

- Notes:
- 1) A migrant is defined as someone born outside the study district.
 - 2) All cases where either father or youngest co-resident migrant child has no identifiable birthplace are excluded from the analysis.
 - 3) 'Intermediate' locations are those outside the study district and more than two kilometres from the father's birthplace.
 - 4) The difference between the combined iron occupations and the combined non-iron occupations is statistically significant in both columns of the Table:

Column (a) : $\chi^2 = 5.43$, 1 degree of freedom, $p < 0.02$

Column (b) : $\chi^2 = 3.10$, 1 degree of freedom, $p < 0.10$

general direction of the relationship found in column (a) appears to hold good for those who came from longer distances. The families were recruited directly into the industry; the more menial miners seem no more prone to move in short steps than the more skilled iron workers.

* * * * *

The evidence discussed here suggests that, although very important, levels of skill are but one explanation of variations in occupational migration patterns. The material on migration distance and spatial origins suggests the nature, organisation and wider culture of the work on offer (and left behind) to be just as important. Similarly, the evidence on labour recruitment, such as it is, suggests that distance migrated was as much a function of the demand for labour, of specific recruitment drives, and of the operation of job information networks as it was of any skill-determined variation in the willingness to move. In particular, direct, long-distance mobility was not the preserve of the urban skilled, and the short distances moved by most rural dwellers at this time were in many cases the result of lack of opportunity rather than limited horizons.

CHAPTER 7. MIGRATION INTO GRANTHAM IN COMPARATIVE PERSPECTIVE

This chapter outlines some of the main characteristics of the growth of Grantham in the second half of the nineteenth century. Migration into the town is explored using material from the 1881 census. The purpose is two-fold. First, to place the findings on Scunthorpe in a more comparative context. Second, to sketch out the main features of what might be seen as more 'conventional' urban migration, into a mature town with a wider range of economic opportunities.

I

The town of Grantham lies in the south of Lincolnshire, in the division of Kesteven, close to the Leicestershire border. In the first half of the nineteenth century it was one of the 'Banburys of England'¹: a middle-ranking market town, largely untouched by the industrial revolution, possessing a wide range of traditional crafts and functioning as a service centre within a mainly agrarian economy. It lay at the centre of 'the most gentrified region in Lincolnshire'², surrounded by large estates.³ Agriculture and transport were the mainstays of its economy, encouraged by its strategic position on the main coaching route between London and the north.⁴

In the period 1850 to 1880, however, Grantham developed into an industrial town. Much of this expansion occurred beyond the borough itself in adjacent townships (Figures 7.1 and 7.2). By 1879 the urban area had spread so much that an Extension Act incorporated these outer regions into an enlarged Municipal Borough (Figure 7.3).⁵ There were two related causes of this growth in population: the coming of the railway and the rise of the engineering industry.⁶

In August 1852 the Great Northern Railway opened, connecting London and

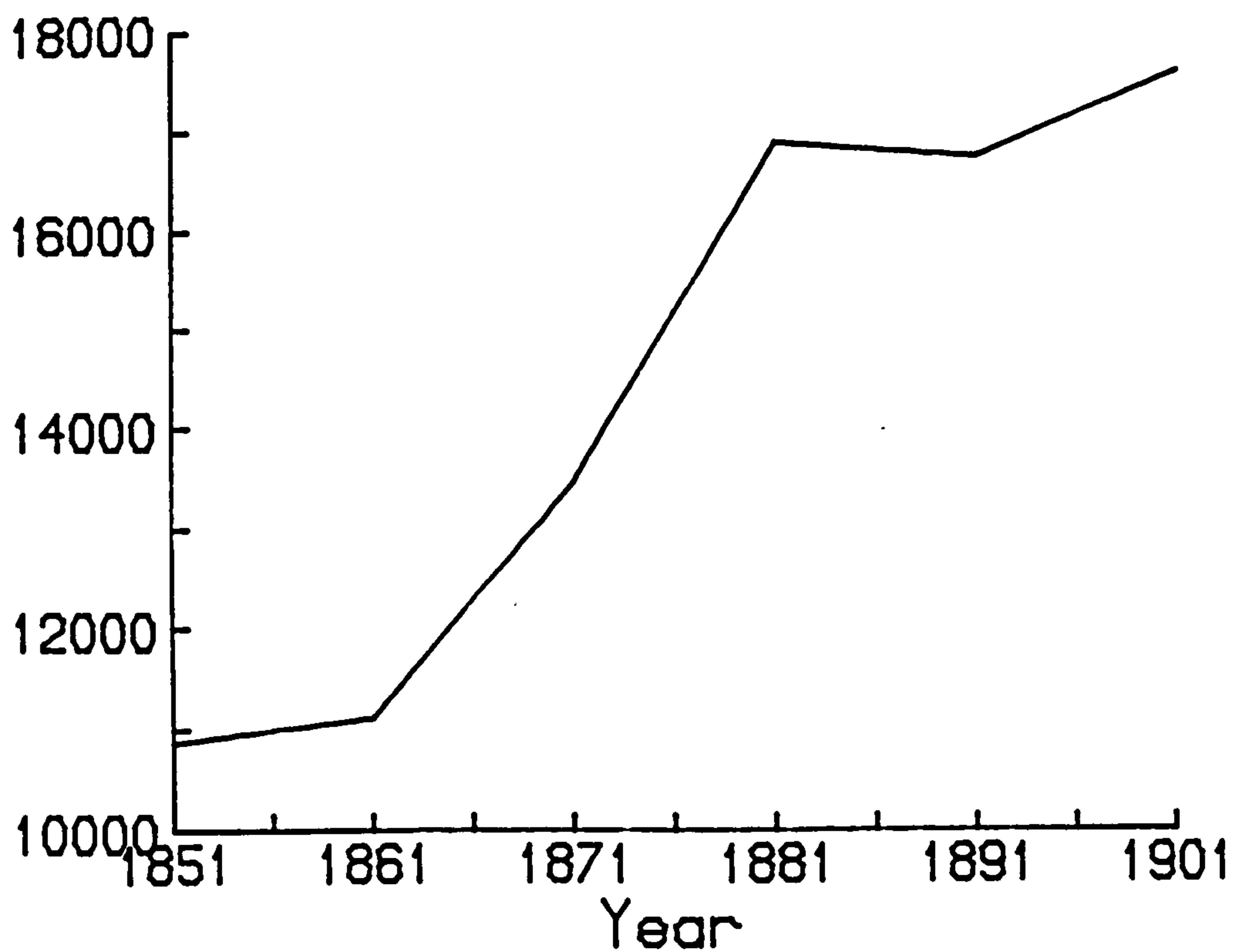


Figure 7.1

Population of Grantham Municipal Borough, as constituted following the Extension Act of 1879. (Totals for 1851 and 1861 are approximations as they include some areas outside this area).

Source: published censuses.

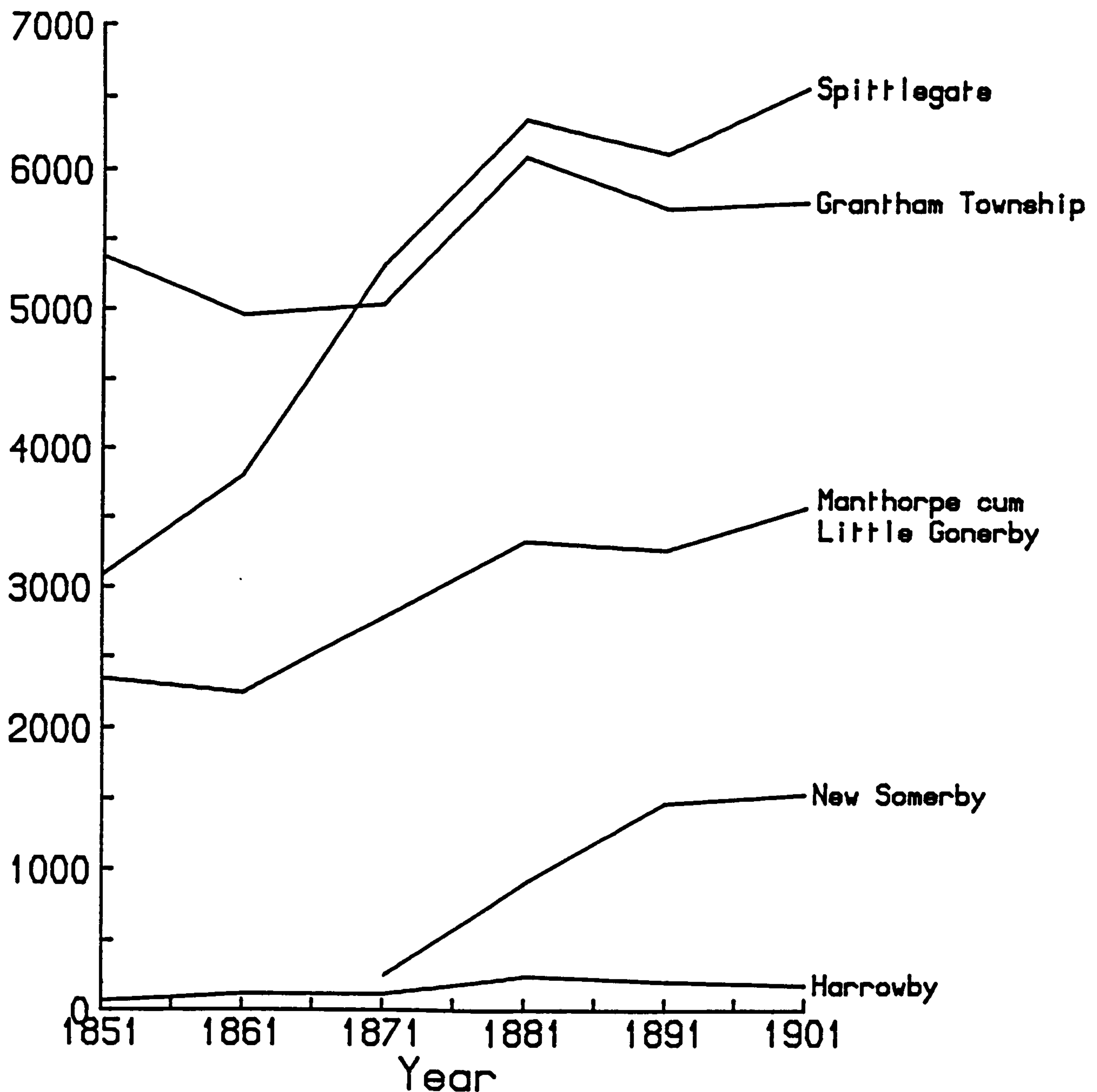
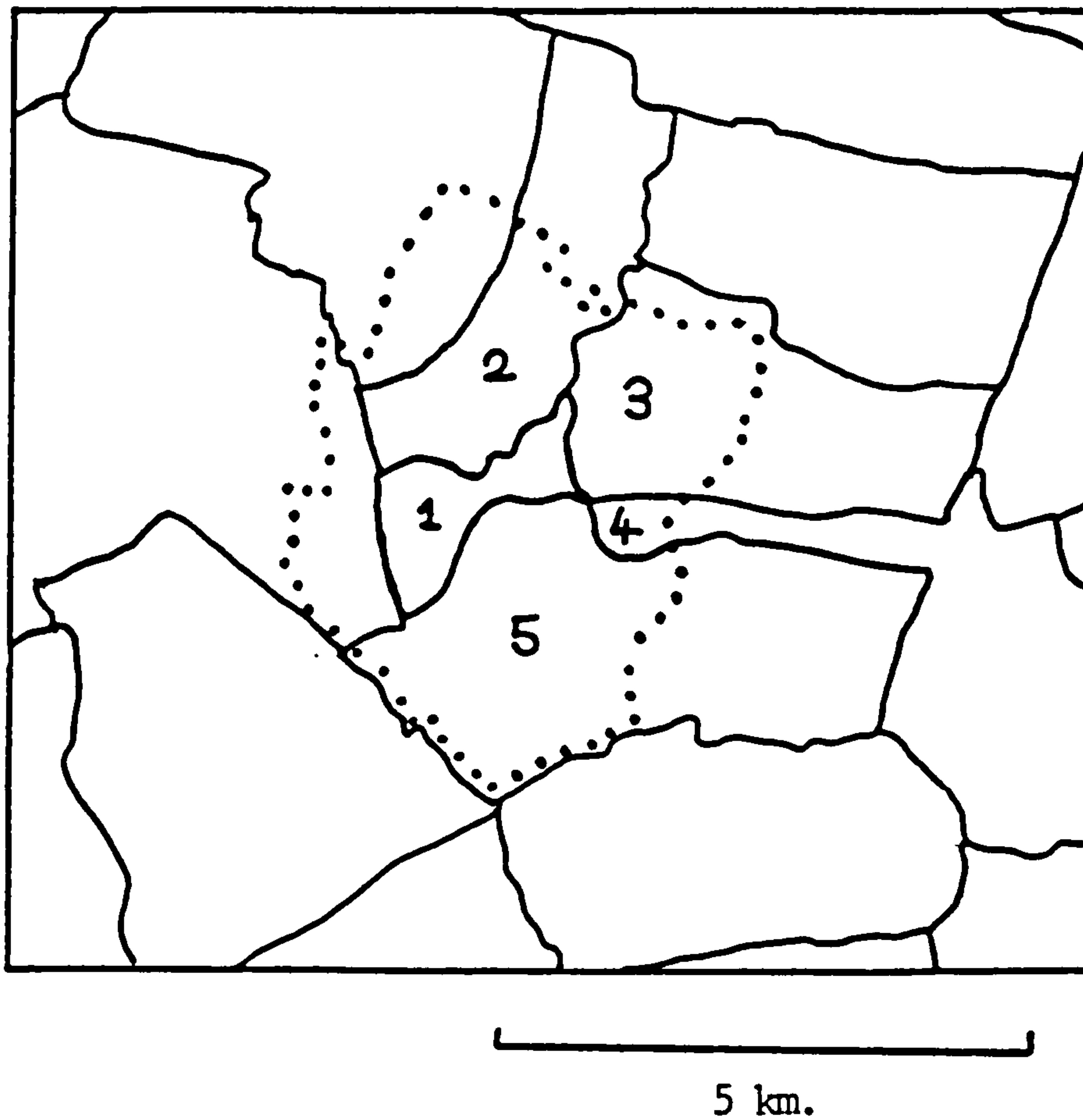


Figure 7.2

Population of constituent townships, Grantham Municipal Borough. (Figures for 1851 and 1861 are approximations as they include some areas outside the Borough boundary of 1879 onwards). (No information is available on New Somerby before 1871).

Source: published censuses.

Figure 7.3 Grantham Municipal Borough



Dotted outline represents boundary of Municipal Borough following the Borough Extension Act 1879.

Townships containing population within the Municipal Borough in the 1881 census:

- 1 - Grantham Township/old Borough
- 2 - Manthorpe cum Little Gonerby
- 3 - Harrowby
- 4 - Somerby
- 5 - Spittlegate

Source: based on Wright (1982), 11.

York, with a branch line to Boston in Lincolnshire.⁷ Grantham immediately became an important railway town, with not only a large station but extensive engine sheds in which locomotives and rolling stock were maintained.⁸ The GNR depot was built outside the then borough in the neighbouring township of Spittlegate. Next door were the premises of Richard Hornsby, iron founder and agricultural engineer.

Hornsby founded his firm in 1815, but his first real breakthrough came in 1849 with the successful production of a steam plough. The machine was a runaway success, securing international acclaim for the firm. Encouraged by the timely opening of the GNR, and sustained by the mid-Victorian 'High Farming' boom, the works expanded rapidly.⁹ By 1857 they were 'an immense manufactory....The whole operations in this establishment are on a great scale and will astonish the uninitiated visitor'.¹⁰ By 1880 the Spittlegate Iron Works of Messrs. Hornsby, as they now were, had become one of the leading manufacturers of agricultural implements in the world and the largest single employer in Grantham.¹¹ 'The prosperity of the town is largely due to the growth of these works' reported White's Directory in 1882.¹² And while the works 'acted somewhat as feeders to the town and trade'¹³, their impact on urban growth was equally immense:

'They came to a place almost deserted; there are very few inhabitants, and they take an open field; they set up works which have been increased from time to time until now, when in these works they employ one thousand men, and when there are probably one thousand families dependent on them for support ... Where and what would Spittlegate be but for them? Why, gentlemen, they have created Spittlegate. As they increased their works the people flocked there and set up houses, coming from all parts of the country'.¹⁴

Although by far the largest, Hornsbys were not the only engineering and iron founding firm in Grantham by 1880. The Phoenix Iron Works and the Perseverance Works were also important concerns; the latter, for example,

employed 60 men and 12 boys in 1881.¹⁵ Another important industry to expand in the mid-Victorian period was carriage building with its attendant trades of leather working and wheelwrighting. The largest such concern was the Brownlow Carriage Works.¹⁶

Most of this new industry was situated to the south and west of the old borough, and it was these areas, too, which saw large scale residential development. The period of expansion was temporarily checked in the late 1870s and 1880s (Figure 7.1) when agricultural depression hit the engineering firms hard.¹⁷ By 1881 most of the development shown in the map of 1908 (Figure 7.4) had taken place.

II

Table 7.1 shows the pattern of economic activity in the town in 1881, using data from the one-in-three sample of the Municipal Borough described in Chapter 2. The main contrast with the Scunthorpe district is the higher proportion of working females – 30% compared with 13.5 %. This is partly a function of the greater percentage of single and widowed females in Grantham (Table 7.2), but there was nevertheless a genuinely higher female labour force participation rate in the town (Table 7.3, compared with Table 5.2).

The occupational structure of Grantham was more balanced than in Scunthorpe. Table 7.4 shows that while the engineering industry – and the Spittlegate Iron Works in particular – was the largest single area of male employment, it only accounted for between 20% and 30% of male jobs in 1881.¹⁸ A great many males were employed in the more traditional crafts and trades to be found in any Victorian market town. The GNR employed about one in twenty of the male workforce. Female employment was, typically, dominated by domestic service and, to a lesser extent, crafts such as

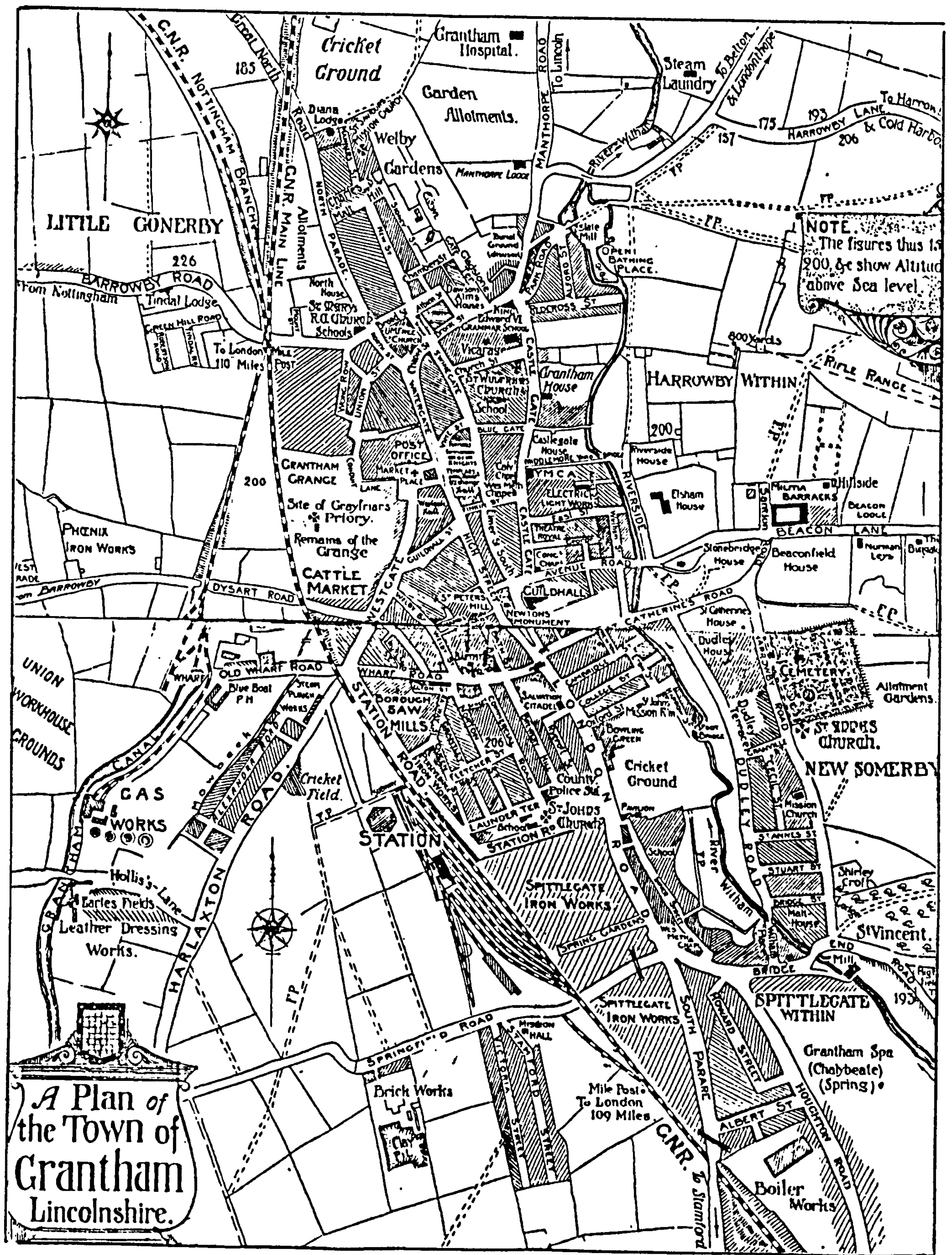


Figure 7.4 Francis Wilson's map of Grantham, c.1908.

TABLE 7.1 ECONOMIC ACTIVITY RATES OF MALES AND FEMALES AGED
10 AND ABOVE, GRANTHAM SAMPLE 1881

	<u>Males</u> %	<u>Females</u> %
Active	83.0	29.9
Not Active	14.9	68.2
Unemployed	1.3	0.1
Pauper	0.2	0.2
Independent	0.3	1.5
Unknown	0.3	-
	<hr/> 100.0	<hr/> 99.9
	(N=1784)	(N=2011)

Source: C.E.Bs.

Note: The category 'not active' includes a very small number of persons recorded as retired, sick, receiving alms, and as having 'formerly' followed an occupation.

TABLE 7.2 **MARITAL STATUS OF FEMALES AGED 10 AND ABOVE, GRANTHAM
SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881**

	<u>Grantham</u> %	<u>Scunthorpe district</u> %
Single	46.4	31.3
Married	45.2	64.4
Widowed	8.4	4.3
	<hr/>	<hr/>
	100.0	100.0
	(N=2010)	(N=1595)

Source: C.E.Bs.

Note: Cases with unknown marital status were excluded from the analysis.

TABLE 7.3 ECONOMIC ACTIVITY RATES OF FEMALES AGED 10 AND ABOVE,
BY MARITAL STATUS, GRANTHAM SAMPLE 1881

	<u>Single</u> %	<u>Married</u> %	<u>Widowed</u> %
Active	49.8	7.4	41.4
Not Active	49.1	92.3	43.9
Unemployed	0.2	-	-
Pauper	0.1	-	2.4
Independent	0.8	0.3	12.4
	<u>(100.0)</u>	<u>(100.0)</u>	<u>(100.1)</u>
	(N=932)	(N=909)	(N=169)

Source: C.E.Bs.

- Notes:
- 1) The category 'not active' includes a very small number of persons recorded as retired, sick, receiving alms and as having 'formerly' followed an occupation.
 - 2) One female had no marital status recorded, and was excluded from this Table.

TABLE 7.4 OCCUPATIONAL STRUCTURE OF THE ECONOMICALLY ACTIVE,
GRANTHAM SAMPLE, 1881

	<u>Males</u> %	<u>Females</u> %
Engineering industry ^a	19.1	-
Craft, possibly engineering	8.5	-
Labourers, unspecified and miscellaneous ^b	14.6	-
Craft ^c	16.4	25.0
Railway ^d	5.1	0.5
Hotel/Inn/accommodation trade	1.9	3.1
Other trade/commerce ^e	17.6	11.0
Agriculture	5.2	-
Domestic service	2.8	53.3
Clerical	1.3	0.2
Public service, police	1.3	0.2
Army	0.6	-
Art/entertainment	0.3	1.0
Professional/legal/medical/clergy	1.9	-
Education	0.9	5.4
Other	2.4	0.3
	<hr/> 99.9 (N=1490)	<hr/> 100.0 (N=589)

Source: C.E.Bs.

- Note:
- (a) includes clerks and labourers positively identified as employed in engineering
 - (b) includes builders' labourers
 - (c) includes apprentices but not assisting labourers
 - (d) includes clerks and labourers identified as employed on the railway
 - (e) includes assistants

millinery. The proportion of women in domestic service was higher in the Scunthorpe district (63 per cent), reflecting the greater range of alternative opportunities for women in Grantham.

The economic structure of the town, then, was less monolithic and less exclusively male than in Scunthorpe.

A comparison of the major industries of the two places suggests that Grantham engineering possessed a sharper division of labour than did the north Lincolnshire iron industry. In the Hornsby works the sub-division of labour between different trades was 'carried out as much as possible'.¹⁹ A formal system of apprenticeship operated.²⁰ In 1891 the firm reported that it employed between 750 and 850 skilled men, '350 apprentices or other learners or young persons' and '150-200 unskilled labourers'.²¹ The structure of employment in the industry is more easily delineated than in the case of the Scunthorpe iron workers, and is shown in Table 7.5.²² Clearly, Grantham engineering was dominated more by skilled operatives than was the north Lincolnshire iron industry, and these men possessed that skill in a more formal sense. Furthermore, the 'unskilled' labourers in Grantham can best be regarded as semi-skilled: to be a 'labourer at the iron works' was to be a cut above a general labourer or a farm worker²³, just as it was in Scunthorpe. This group are therefore more roughly comparable with the 'lower' iron workers than the iron miners of Scunthorpe.

III

Grantham was less dominated by newcomers than was the Scunthorpe district. Table 7.6 shows that rather over half the inhabitants were migrants, reflecting the longer period of time during which the town had expanded by 1881. This is also reflected in the more conventional age-structure of the population (Figure 7.5). The area which consisted most overwhelmingly of very

TABLE 7.5 THE STRUCTURE OF EMPLOYMENT WITHIN THE MAJOR INDUSTRY,
ECONOMICALLY ACTIVE POSITIVELY IDENTIFIED MALE
EMPLOYEES, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT
STUDY TOWNSHIPS, 1881

	<u>Grantham</u> <u>Engineering</u> %	<u>Scunthorpe District</u> <u>Iron</u> %
Managerial/Clerical/White Collar	9.2	4.9
'Higher' iron workers/'skilled' engineering workers	59.9	36.0
'Lower' iron workers/unskilled and semi-skilled engineering workers	30.9	59.1
	<hr/> 100.0 (N=282)	<hr/> 100.0 (N= 450)

Source: C.E.Bs.

Note: The Scunthorpe district figures exclude iron miners.

TABLE 7.6 PROPORTION OF THE POPULATION NON-NATIVE, BY AGE AND SEX, GRANTHAM SAMPLE 1881

	<u>Males</u> %	(N)	<u>Females</u> %	(N)
0-	8.9	(79)	8.6	(81)
1-	26.0	(292)	20.0	(275)
5-	35.2	(298)	40.3	(320)
10-	42.3	(253)	42.5	(301)
15-	51.0	(243)	55.6	(288)
20-	61.7	(201)	65.6	(259)
25-	73.3	(352)	75.3	(372)
35-	73.3	(273)	77.3	(282)
45-	77.7	(202)	74.9	(211)
55-	75.7	(140)	74.8	(163)
65-	78.5	(107)	82.3	(130)
	55.2	(2440)	57.2	(2682)

Source: C.E.Bs.

- Note:
- 1) The definition of migrant used here is any person born outside one of the townships constituting the Municipal Borough of 1879 onwards. As portions of these townships lay outside the Borough, the figures slightly underestimate, if anything, the proportion of migrants.
 - 2) Individuals with no identifiable county of birth, or, if born in Lincolnshire, no identifiable community of birth, are excluded from the analysis.

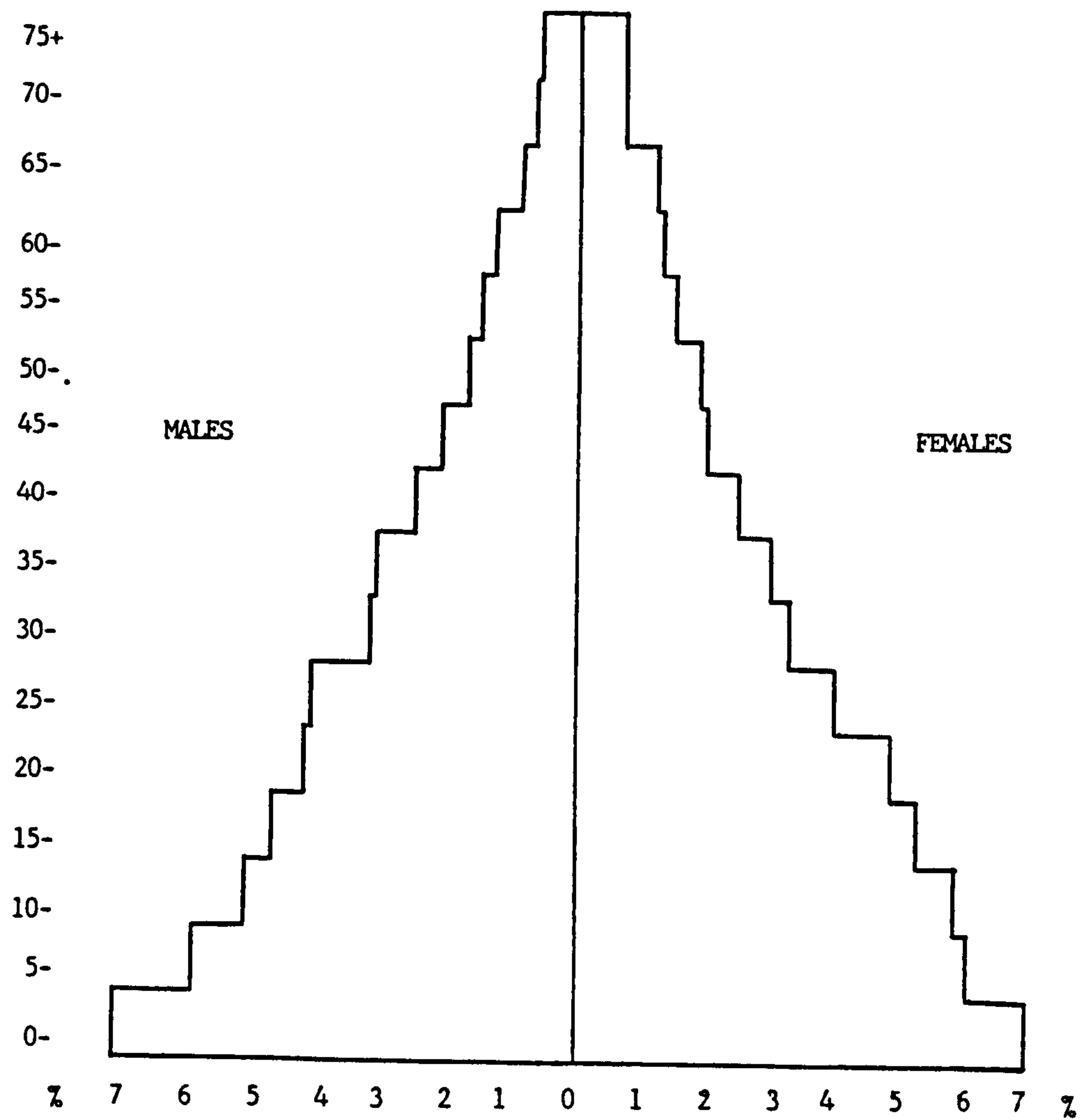


Figure 7.5

Population structure of Grantham Municipal Borough,
1881

Source: published census 1881.

TABLE 7.7 PROPORTION OF THE POPULATION NON-NATIVE, BY AGE AND LOCATION, GRANTHAM SAMPLE 1881

Age	Grantham		Manthorpe cum Little Gomerby		Spittlegate		Harrowby		New Somerby	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
0-	8.3	(48)	8.3	(24)	8.3	(72)	66.7	(3)	30.8	(13)
1-	21.6	(171)	22.1	(95)	24.4	(258)	40.0	(10)	45.5	(33)
5-	34.4	(186)	33.1	(142)	44.7	(237)	55.6	(9)	65.9	(44)
10-	50.5	(204)	32.7	(107)	42.1	(197)	70.0	(10)	77.8	(36)
15-	60.1	(233)	44.6	(112)	51.6	(155)	90.0	(10)	77.3	(22)
20-	67.5	(169)	56.9	(72)	63.9	(194)	66.7	(6)	95.0	(20)
25-	72.2	(237)	69.7	(132)	77.5	(289)	88.2	(17)	95.7	(47)
35-	73.7	(179)	77.0	(122)	78.5	(209)	100.0	(12)	90.9	(33)
45-	68.0	(153)	76.3	(76)	87.1	(163)	100.0	(6)	94.4	(18)
55-	76.3	(114)	63.2	(76)	85.1	(101)	100.0	(1)	92.9	(14)
65-	75.0	(92)	81.3	(75)	86.7	(60)	100.0	(3)	100.0	(7)
All	57.4	(1786)	53.1	(1033)	58.4	(1935)	78.2	(87)	78.0	(287)

Source: C.E.Bs.

- Notes: 1) Those individuals born in one of the other four townships are classed as non-natives, except that those with the birthplace 'Grantham' are always classed as natives.
- 2) Individuals with no identifiable county of birth or, if born in Lincolnshire, no identifiable community of birth, are excluded from the analysis.

TABLE 7.8 NET MIGRATION, GRANTHAM REGISTRATION SUB-DISTRICT
1861-80

	<u>Natural increase</u>	<u>Actual increase</u>	<u>Net Migration</u>
<u>1861-70</u>			
Males	1223	1031	-192
Females	1305	1068	-237
<u>1871-80</u>			
Males	1581	1627	+46
Females	1594	1390	-204

Source: Census Reports, 1861, 1871, 1881; Register General's
Annual Reports, no.s 24 to 43.

Note: Births have been corrected for underregistration using
the 'adjustment factor' for Lincolnshire calculated
by Teitelbaum (1974).

TABLE 7.9 SEX RATIOS AND THE PROPORTION OF THE POPULATION
NON-NATIVE, CONSTITUENT TOWNSHIPS, GRANTHAM
SAMPLE, 1881

<u>Township</u>	Sex ratio (Males per 100 females)	<u>Non-natives (%)</u>	
		<u>Males</u>	<u>Females</u>
Grantham	89.8	56.2 (\pm 1.5)	58.4 (\pm 1.3)
Manthorpe	87.0	50.6 (\pm 1.9)	55.3 (\pm 1.7)
Spittlegate	104.9	58.1 (\pm 1.3)	58.7 (\pm 1.3)
Harrowby	75.7	76.9 (\pm 5.6)	79.2 (\pm 4.8)
New Somerby	96.1	76.1 (\pm 3.0)	79.7 (\pm 2.7)
Lincolnshire, 1881	100.2		
England and Wales 1881	94.8		

Source: Census Report, 1881; C.E.Bs.

- Note:
- 1) Those persons born in one of the other four townships are classed as non-natives, except that those with the birthplace 'Grantham' are classed as natives, irrespective of their township of residence.
 - 2) Cases with no known county of birth are excluded.
 - 3) Standard errors are shown in parenthesis. They have been adjusted by the 'finite population correction' factor for large sampling fractions, See Schofield (1972), p.161.

recent residential development, New Somerby, did possess more non-natives (Table 7.7).²⁴ Other townships had also grown considerably, but over a longer period of time. Thus in 1851 65 % of the population of Spittlegate were migrants; by 1881 this had fallen slightly to 58.4 %.²⁵

In spite of this expansion, it seems that the net impact of migration on the growth of the town was not so very great. Unfortunately, it is not possible to calculate net migration into the Borough. The smallest unit for which data are available is the registration sub-district in which the town lay. Net migration into this area is shown in Table 7.8. In 1881 the Borough accounted for only 79 % of the total population of the sub-district, so these figures may well mis-represent the true picture. As they stand, it appears that for every person who moved in, another moved out.

Some further information on this topic is given in Table 7.9. Women considerably outnumbered men in every township except Spittlegate, the home of the large Hornsby works. These sex ratios are partly the result of differential migration patterns. All else being equal, either the volume of female in-migration was much greater than that of males, or more males moved out than did females, or both.²⁶ Table 7.9 shows that a higher proportion of females than males were migrants in all four townships with a female surplus, suggesting disparately greater female in-movement. However, the differences between the second and third columns of the Table are quite small, and may well be attributable to sampling error. Rough calculations suggest, anyway, that only a limited portion of the female surplus can be ascribed to such a difference. For example, in Grantham township there was a 'surplus' of 326 females. Approximately 70 of these can be attributed to the higher proportion of non-natives among females. If the sex ratio for England and Wales is considered the norm we would expect another 158 to be present anyway, leaving a residuum of 98 unexplained 'extra' females. If the sex ratio

of Lincolnshire as a whole is used instead (with males outnumbering females), the residuum is 262. A similar situation is found in the other three townships. Proportionately greater out-migration among males therefore appears to have been rather more influential than was greater in-migration among females. So the rise of heavy industry did not check the departure of many boys and men: Grantham saw them leave just like its less well-placed fellow market towns.

Figures 7.6 and 7.7 show the origins of the population (except children)²⁷ who possessed an identifiable community of birth in England or Wales. As expected, the town had a wide migration field, albeit dominated by short-distance movement. Overall, the economic structure of Grantham had a less idiosyncratic influence on the pattern of in-migration into the town than was the case in the Scunthorpe district. The only exceptions to the general picture of distance-decay are London and certain neighbouring towns whose larger size probably accounts for their over-representation among sources of migrants.

A more detailed examination of migration confirms a contrast between Grantham and the new industrial district of Scunthorpe. Tables 7.10 and 7.11 compare the migration distances of those who moved into the two areas (and see Figure 7.8). Of the larger occupational groups outside the industrial sector, those in Grantham contained more men from longer distances. Although it seems Grantham possibly had a rather smaller pool of eligibles within its immediate hinterland than did Scunthorpe²⁸, the Tables nevertheless point to the greater pulling power of the more mature and economically 'balanced' urban settlement. This picture is confirmed when the last apparent residence of migrant fathers is used instead of birthplaces (Table 7.12). It disappears, however, when we turn to economically active females (Table 7.13). Even in Grantham, it seems, the demand for female labour could be adequately met

Figure 7.6

BIRTHPLACES OF MALES
(CHILDREN EXCLUDED)
GRANTHAM 1881

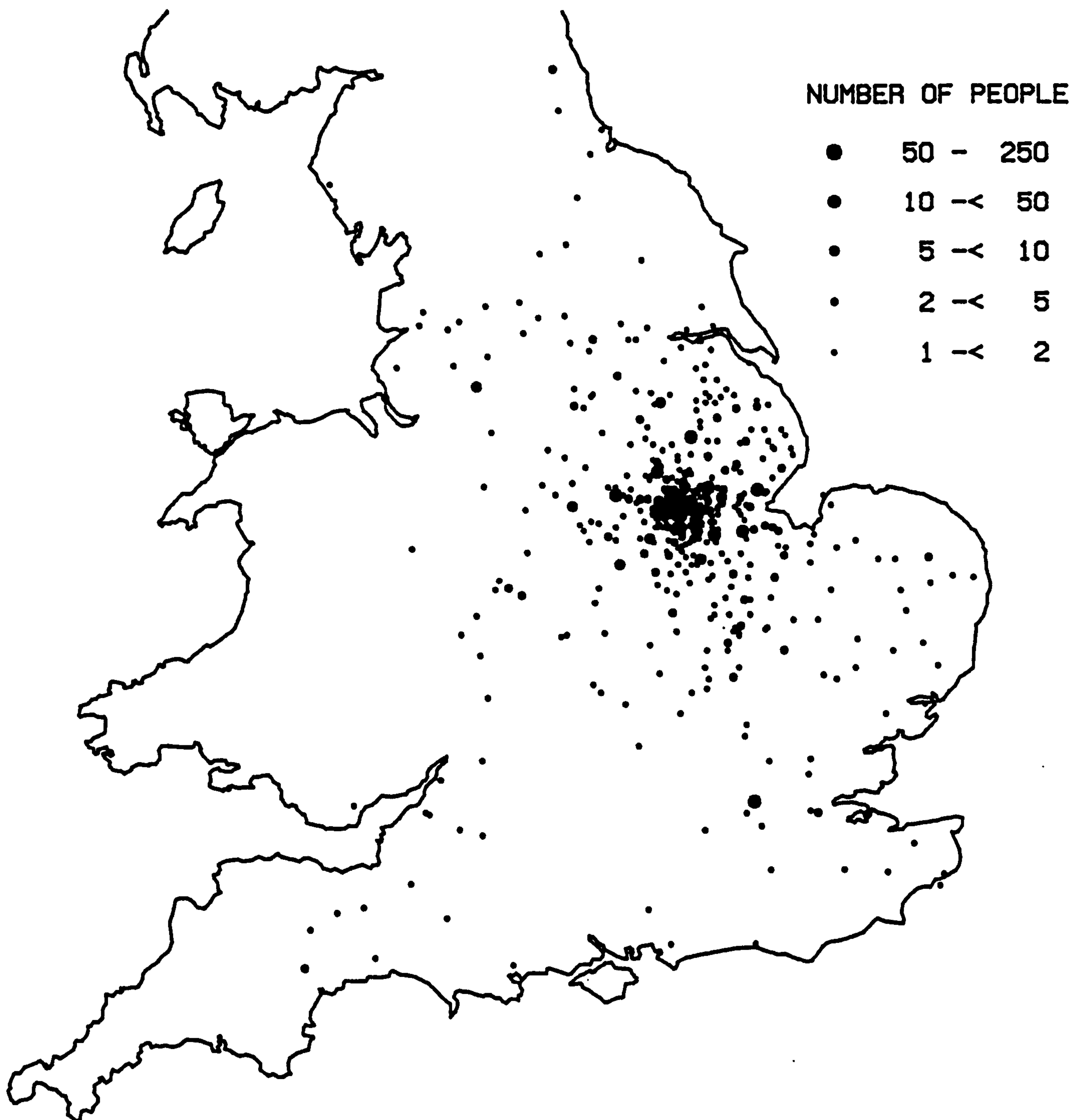


Figure 7.7

BIRTHPLACES OF FEMALES
(CHILDREN EXCLUDED)
GRANTHAM 1881

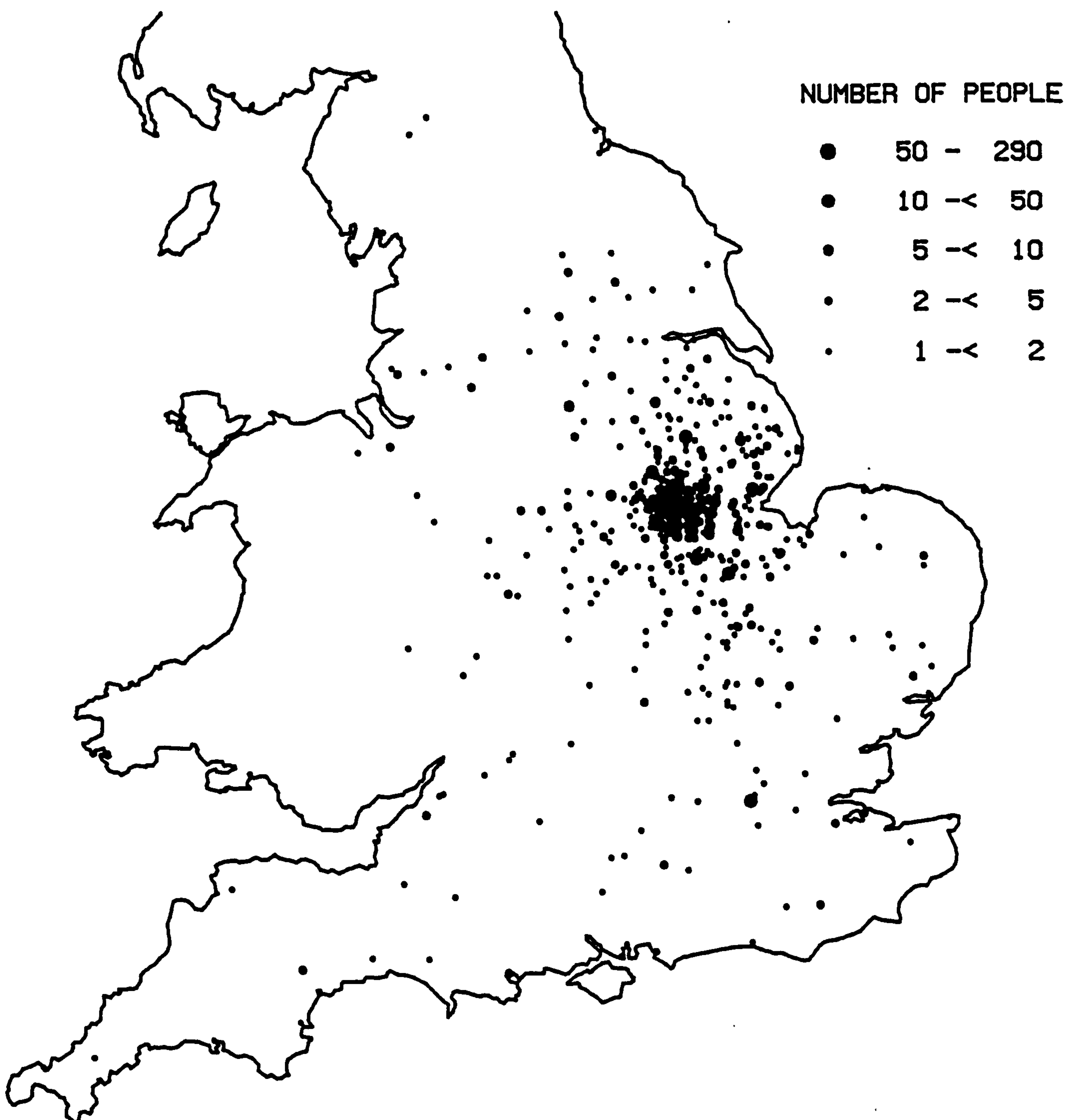


TABLE 7.10 MEAN BIRTHPLACE DISTANCES, ECONOMICALLY ACTIVE
MIGRANT MALES IN SELECTED OCCUPATIONS, GRANTHAM
SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS,
1881 (CHILDREN EXCLUDED)

	<u>Grantham</u>		<u>Scunthorpe District</u>	
	Mean	(N)	Mean	(N)
<u>Industrial (iron/engineering)</u>				
Managerial/Clerical/White collar	75.6	(13)	124.8 _b	(15)
'Higher'/'Skilled' manual	70.0 _a	(69)	68.1 _b	(112)
'Lower'/'Less 'skilled' manual	49.9 _c	(36)	69.1 _d	(193)
Iron miners			39.0	(299)
<u>Non-industrial</u>				
Agriculture	47.6 _e	(53)	21.2 _f	(121)
Trade and Commerce	50.7 _g	(164)	38.4 _h	(71)
Craft	72.1 _i	(126)	54.5 _j	(26)
Railway	62.2	(56)	60.8	(13)
Professional/Legal/Medical/ Educational/Clergy	79.9	(27)	75.1	(10)

Source: C.E.Bs.

- Notes: 1) A migrant is defined as someone born outside the respective study district.
- 2) Cases with unidentifiable communities of birth are excluded from the analysis. County centroids are not used.
- 3) The following pairs of differences are statistically significant by a two-tailed test:

c/d : $t = 1.47$, 229 degrees of freedom, $p < 0.20$

e/f : $t = 3.22$, 172 degrees of freedom, $p < 0.01$

g/h : $t = 1.65$, 233 degrees of freedom, $p < 0.10$

The following pairs of differences are not statistically significant:

a/b : $t = 0.17$, 179 degrees of freedom

a/c : $t = 1.26$, 103 degrees of freedom

b/d : $t = 0.11$, 303 degrees of freedom

i/j : $t = 0.94$, 150 degrees of freedom

TABLE 7.11 PROPORTION OF MIGRANTS BORN WITHIN 50 KILOMETRES, ECONOMICALLY ACTIVE MALES IN SELECTED OCCUPATIONS, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881 (CHILDREN EXCLUDED)

	<u>GRANTHAM</u>		<u>SCUNTHORPE DISTRICT</u>	
	%	(N)	%	(N)
<u>Industrial (iron/engineering)</u>				
Managerial/Clerical/White collar	41.2	(17)	21.1	(19)
'Higher'/'skilled' manual	56.6 ^a	(76)	54.6	(130)
'Lower'/less 'skilled' manual	78.6 ^b	(42)	54.4	(226)
Iron miners	-		78.2	(316)
<u>Non-industrial</u>				
Agriculture	77.2 ^c	(57)	87.6 ^d	(129)
Trade and Commerce	63.0 ^e	(181)	72.4 ^f	(76)
Craft	58.0 ^g	(131)	72.4 ^h	(29)
Railway	54.0	(63)	35.3	(17)
Professional/Legal/Medical/ Educational/Clergy	54.8	(31)	46.2	(13)

Source: C.E.Bs.

- Notes: 1) A migrant is defined as someone born outside the respective study district.
- 2) County centroids have been used where only the county of birth is known. All such cases from counties adjacent to the study area are classed as within 50 km. For Scunthorpe these are Lincolnshire, Nottinghamshire and Yorkshire. For Grantham these are Lincolnshire, Leicestershire, Nottinghamshire, Northamptonshire and Rutland.
- 3) The following pairs of differences are statistically significant:
- a/b : $\chi^2 = 5.71$, 1 degree of freedom, $p < 0.02$
- c/d : $\chi^2 = 3.25$, 1 degree of freedom, $p < 0.10$
- e/f : $\chi^2 = 2.09$, 1 degree of freedom, $p < 0.20$
- g/h : $\chi^2 = 2.06$, 1 degree of freedom, $p < 0.20$

The differences between Grantham and the Scunthorpe district across all five non-industrial classes combined is statistically significant:

$$\chi^2 = 16.14, 1 \text{ degree of freedom, } p < 0.001$$

Figure 7.8

Cumulative frequency distribution of migration distances in selected occupations, males (children excluded), Grantham Municipal Borough, 1881.

Source: sample of CEBs, 1881.

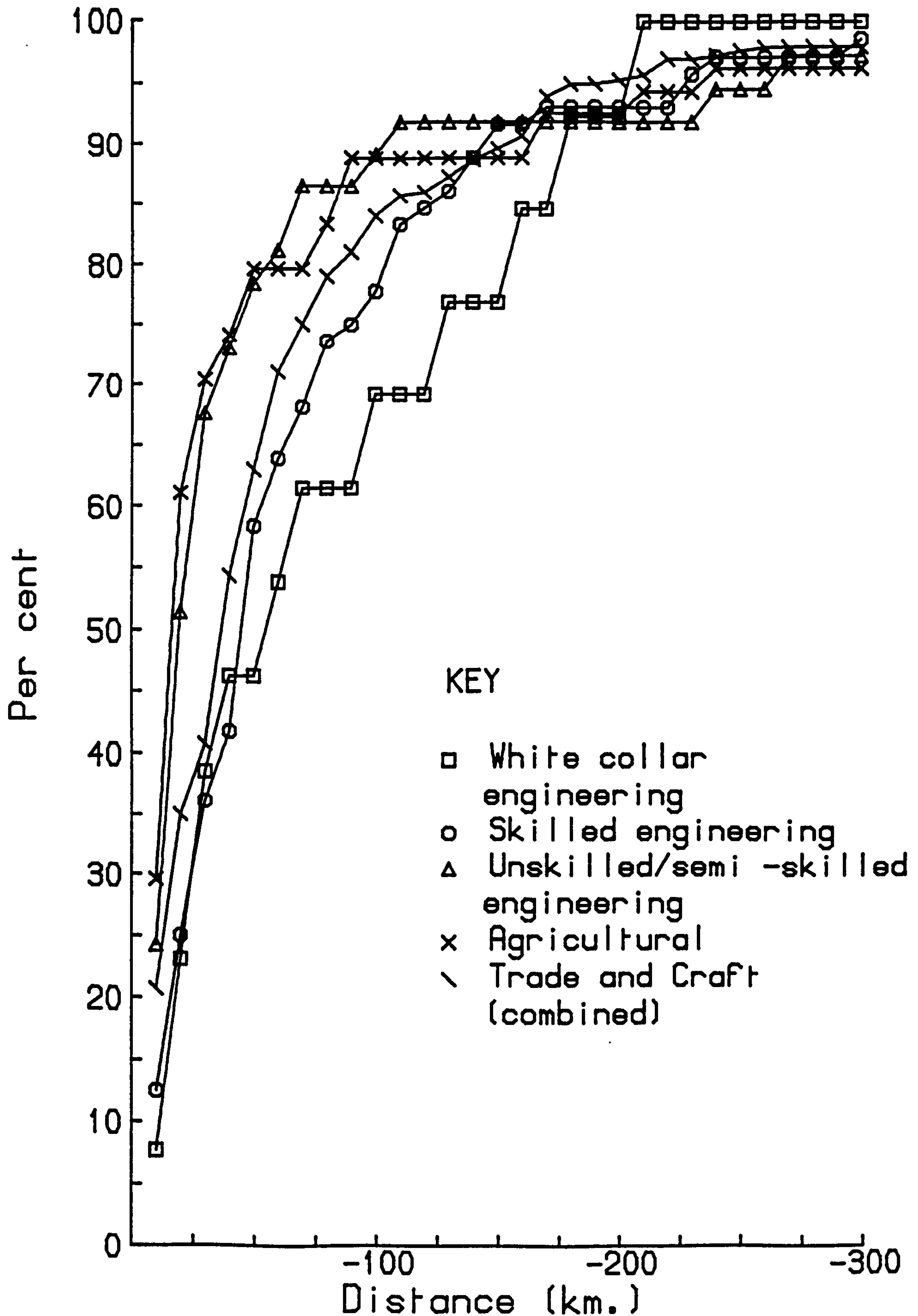


TABLE 7.12 PROPORTION OF MIGRANT FATHERS WITH LAST APPARENT RESIDENCE WITHIN 50 KILOMETRES, ECONOMICALLY ACTIVE FATHERS IN SELECTED OCCUPATIONS WITH CO-RESIDENT MIGRANT CHILDREN, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

	<u>GRANTHAM</u>		<u>SCUNTHORPE DISTRICT</u>	
	%	(N)	%	(N)
<u>Industrial (iron/engineering)</u>				
Managerial/Clerical/White collar	50.0	(4)	14.3	(7)
'Higher'/'skilled' manual	57.1	(21)	56.5	(46)
'Lower'/less 'skilled' manual	57.1	(14)	55.2	(87)
Iron miners			76.2	(130)
<u>Non-industrial</u>				
Agriculture ^a	62.5	(16)	84.2	(38)
Trade and Commerce ^b	66.0	(47)	75.9	(29)
Craft ^c	58.3	(36)	87.5	(8)
Railway	50.0	(22)	100.0	(3)
Professional/Legal/Medical/ Educational/Clergy	100.0	(3)	42.9	(7)

Source: C.E.Bs.

- Notes:
- 1) A migrant is defined as someone born outside the respective study district. This applies to both father and child.
 - 2) Cases where the youngest co-resident migrant child was aged 20 years or older are excluded to preserve accuracy.
 - 3) All cases where either father or youngest co-resident migrant child has no identifiable birthplace are excluded from the analysis.
 - 4) The difference between Grantham and the Scunthorpe district across categories a, b and c combined is statistically significant:

$$\text{chi}^2 = 7.21, \text{ 1 degree of freedom, } p < 0.01$$

TABLE 7.13 PROPORTION OF MIGRANTS BORN WITHIN 50 KILOMETRES, ECONOMICALLY ACTIVE FEMALES IN SELECTED OCCUPATIONS, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881 (CHILDREN EXCLUDED)

	<u>GRANTHAM</u>		<u>SCUNTHORPE DISTRICT</u>	
	%	(N)	%	(N)
Trade	66.7	(42)	63.6	(11)
Craft	56.4 ^a	(55)	72.0 ^b	(25)
Domestic Service : all females	76.6 ^c	(218)	80.6 ^d	(93)
Domestic Service : single females	78.7	(188)	78.8	(80)

Source: C.E.Bs.

- Notes:
- 1) A migrant is defined as someone born outside the respective study district.
 - 2) The 'trade' category includes those enumerated in the hotel, inn and accommodation trade in Grantham.
 - 3) The difference a/b is statistically significant at a low level: $\chi^2 = 1.77$, 1 degree of freedom, $p < 0.20$. The difference c/d is not statistically significant: $\chi^2 = 0.61$, 1 degree of freedom.
The difference between Grantham and the Scunthorpe district across all of the first three listed categories combined is not statistically significant: $\chi^2 = 1.55$, 1 degree of freedom.

TABLE 7.14 BIRTHPLACE DISTANCES OF ECONOMICALLY ACTIVE FEMALES
IN SELECTED OCCUPATIONS, GRANTHAM SAMPLE 1881
(CHILDREN EXCLUDED)

<u>Birthplace Distance (cumulative per cent)</u>					
	<u>Non</u>				
	<u>Migrant</u>	<u>1-49 km</u>	<u>50-99 km</u>	<u>≥100 km</u>	(N)
<u>All Females</u>					
Trade ^a	40.0	80.0	91.4	100.0	(70)
Craft ^b	30.4	69.6	89.9	100.0	(79)
Domestic Service ^c	17.1	80.6	90.9	100.0	(263)
<u>Single Females</u>					
Trade ^d	56.0	80.0	96.0	100.0	(25)
Craft ^e	27.5	65.0	90.0	100.0	(40)
Domestic Service ^f	17.9	82.5	91.7	100.0	(229)

Source: C.E.Bs.

- Note:
- 1) A migrant is defined as someone born outside the study district.
 - 2) The 'trade' category includes those enumerated in the hotel, inn and accommodation trade.
 - 3) The following pairs of differences are statistically significant by the Kolmogorov-Smirnov two-sample test:

$$\begin{aligned} a/c &: p < 0.01 \\ d/f &: p < 0.01 \end{aligned}$$

The following pairs of differences are not significant at the 0.10 level or better:

$$a/b, b/c, d/e, e/f$$

from local sources. Obviously, the true picture is distorted by the inclusion of married women, whose in-migration was not undertaken wholly independently. Unfortunately, only unmarried servants can be compared, as the number of single women in other occupations was minute in the Scunthorpe district. Excluding married and widowed women has a negligible effect. It would seem, however, that servants are a special case. Table 7.14 shows that remarkably few domestic servants were natives, compared with females in the other two groups shown. Yet a far greater proportion were born outside the town but within 50 kilometres. This phenomenon has been found in other Victorian towns.²⁹ Employers preferred to take country girls into their households; females from rural areas sought the security of domestic service; native women were thus poorly represented among servants.³⁰

Assuming a very rough comparability between the various occupational categories, Tables 7.10 and 7.11 also suggest the Grantham engineering workers possessed a more conventional migration profile than did the Scunthorpe furnace men. Skilled men moved longer distances than the less skilled (though the differences in Table 7.10 are not statistically significant). This testifies once more to the difficulties of the Scunthorpe district iron companies in obtaining an adequate supply of local labour, and the preference of ex-farm workers for iron mining. (The difference between the industrial sectors disappears in Table 7.12, but the number of cases is too small to be of any real meaning).

Contrasts are evident, too, in the degree of 'urbanity' within the migrant streams (Table 7.15).³¹ Overall, migrants to Grantham were noticeably more 'urban' than their counterparts in the northern settlements. This accords with the generalisation that migrants tend to move horizontally or up - rather than down - the urban hierarchy.³² This is most marked among males, but only

TABLE 7.15 MIGRANTS BORN IN URBAN COMMUNITIES BY SEX,
GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY
TOWNSHIPS, 1881 (CHILDREN EXCLUDED)

	<u>Grantham</u>		<u>Scunthorpe District</u>	
	%	(N)	%	(N)
<u>All persons</u>				
Males	34.3 ^a	{ 843 }	20.4 ^b	{ 1109 }
Females	27.7 ^c	{ 1020 }	21.3 ^d	{ 979 }
<u>Persons born in Lincolnshire</u>				
Males	22.0 ^e	{ 455 }	8.7 ^f	{ 791 }
Females	16.0 ^g	{ 587 }	10.7 ^h	{ 713 }
<u>Persons born outside Lincolnshire</u>				
Males	48.7 ⁱ	{ 388 }	49.4 ^j	{ 318 }
Females	43.6 ^k	{ 433 }	50.0 ^l	{ 266 }

Source: C.E.Bs.

- Notes: 1) A migrant is defined as someone born outside the respective study district.
- 2) Cases with no identifiable community of birth are excluded from the analysis.
- 3) The following pairs of differences are statistically significant:
- a/b : $\chi^2 = 47.67$, 1 degree of freedom, $p < 0.001$
- c/d : $\chi^2 = 11.01$, 1 degree of freedom, $p < 0.001$
- e/f : $\chi^2 = 43.30$, 1 degree of freedom, $p < 0.001$
- g/h : $\chi^2 = 8.12$, 1 degree of freedom, $p < 0.01$
- k/l : $\chi^2 = 2.68$, 1 degree of freedom, $p < 0.20$

The difference i/j is not statistically significant:

$$\chi^2 = 0.03, 1 \text{ degree of freedom}$$

TABLE 7.16 PROPORTION OF ECONOMICALLY ACTIVE MIGRANT MALES,
IN SELECTED OCCUPATIONS, WHO WERE BORN IN URBAN
COMMUNITIES, GRANTHAM SAMPLE AND FOUR SCUNTHORPE
DISTRICT STUDY TOWNSHIPS, 1881

	<u>Grantham</u>		<u>Scunthorpe</u>	
	<u>%</u>	<u>(N)</u>	<u>%</u>	<u>(N)</u>
<u>Industrial (iron/engineering)</u>				
Managerial/Clerical/White Collar	41.7	(12)	53.3	(15)
'Higher'/'skilled' manual	66.7 ^a	(69)	38.4 ^c	(112)
'Lower'/less 'skilled' manual	29.4 ^b	(34)	22.8 ^d	(193)
<u>Non-industrial</u>				
Agriculture	17.6	(51)	7.4	(121)
Trade and Commerce	35.0	(160)	19.7	(71)
Craft	40.3	(119)	23.1	(26)
Railway	21.8	(55)	30.8	(13)
Professional/Legal/Medical/ Educational/Clergy	50.0	(24)	50.0	(10)

Source: C.E.Bs.

- Notes: 1) A migrant is defined as someone born outside the respective study district.
- 2) Cases with no identifiable community of birth are excluded from the analysis.
- 3) The following pairs of differences are statistically significant:

$$a/b : \chi^2 = 12.76, 1 \text{ degree of freedom, } p < 0.001$$

$$c/d : \chi^2 = 8.45, 1 \text{ degree of freedom, } p < 0.01$$

holds good for those born in Lincolnshire. Along with Figures 7.6 and 7.7 , Table 7.15 suggests that Grantham was rather more integrated within a local urban network than was the Scunthorpe district at this time.³³ Within the industrial sector, Grantham engineering again exhibits a more conventional picture of migration than does Scunthorpe (Table 7.16). Grantham's skilled men are rather more markedly urban in origin than the less skilled. This reflects the greater accessibility of the latter work to those from an agricultural background, in contrast to the pattern found in Scunthorpe.³⁴ S.H.W. Dawson, a pupil apprentice at Hornsby and Sons between 1900 and 1907, moved to Grantham from London, where he had attended a minor public school. 'Obsessed with the idea of becoming "an engineer" ', his family secured him an apprenticeship - and lodgings - in the town. Yet one of his lasting memories was of the many labourers at the works who came from, or still lived in, nearby villages.³⁵ In contrast to the Scunthorpe iron men, the Grantham engineering workers present a classic case of skill-determined migration differentials.

CHAPTER 8. THE STRUCTURE OF THE MIGRANT STREAM

While many scholars have noted the presence of single people, married couples and families among migrants, little or no systematic attempt has been made to assess the relative importance of these various groups within any particular migration stream. It seems to be generally assumed that most migrants were young and single.¹ Yet, from a rather different perspective, much recent work, including that on Victorian Britain, has stressed the need to place migration within a wider context of familial behaviour.² This would seem to imply that, at least in certain places, the movement of families may have been of considerable importance. Studies of the more detailed Swedish evidence have reached contradictory conclusions over this question. Ohngren found that 80% of incomers to the central Swedish town of Eskilstuna in the later nineteenth century were 'lone' migrants who arrived without any family.³ However, Akerman's study of other nineteenth century Swedish material has led him to conclude that family migration was more important than has hitherto been realised.⁴ The present chapter attempts to cast some light on this issue by exploring the components of the migrant streams into the two case study locations as revealed in data from the 1881 census.

The census is a crude instrument for this task. Broadly speaking, there are four related technical shortcomings. First, in many cases the information given is simply insufficient. For example, a migrant couple with co-resident migrant children most probably moved in as a family unit. But take away the children and the picture becomes unclear: did they arrive together or as single migrants who subsequently met and married? Second, the census may have been taken some considerable time after in-migration occurred and may no longer accurately reflect an individual's familial position at the time of his or her arrival. For example, all co-resident migrant offspring may have since left home, placing a truly migrant couple in an ambiguous category. Third,

the census only shows those who moved in and have remained. Thus while there may have been a greater inwards movement of single migrants than of whole families in preceding years, many of the single people may subsequently have departed in similarly greater numbers. The census would only capture the net effect of this turnover, understating single in-migration. Lastly, there is no guarantee that all members of a family unit actually moved at the same time. For example, a father may have been joined by the other members of his family at a later date.

Yet despite all these problems the census can be made to yield crude estimates of the relative size of two components within the migrant stream. The intention in this chapter is to obtain a rough indication of how many individuals arrived

- as 'single' migrants without a spouse and family

and

- as 'family' migrants who did possess a spouse and family.

Tables 8.1 and 8.2 contain the raw census information from which we will obtain estimates of the size of these two groups. Table 8.1 gives the marital status of all migrant males in the two study locations, excluding those enumerated as dependent children. The 'married' category is broken down into various components in Table 8.2 using information on the birthplace of co-resident spouses and children (where present). If we ignore widowers, those men who originally moved in as dependent children, and those married men who arrived unaccompanied by their wives and/or dependent children, then the male migrants could have arrived in one of three possible states: as single men, as married men with a spouse but no children, or as married men with accompanying children. We need to estimate the size of these three

TABLE 8.1 **MARITAL STATUS OF NON-NATIVE MALES, GRANTHAM
SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS,
1881 (CHILDREN EXCLUDED)**

	<u>Grantham</u>	<u>Scunthorpe district</u>
	%	%
Single	24.9	24.2
Married	67.9	71.6
Widowed	7.2	4.0
Not known	-	0.2
	<hr/>	<hr/>
	100.0	100.0
	(N=860)	(N=1116)

Source: C.E.Bs.

Note: A migrant is defined as someone born outside the
respective study district.

TABLE 8.2 MIGRANT CATEGORY OF MARRIED NON-NATIVE MALES WITH
CO-RESIDENT WIVES, GRANTHAM SAMPLE AND FOUR SCUNTHORPE
DISTRICT STUDY TOWNSHIPS, 1881

<u>Category</u>	<u>Grantham</u>	<u>Scunthorpe district</u>
	%	%
<u>Native wife</u> (i.e. husband assumed to have arrived alone)	20.3	9.1
<u>'Intermediate'</u> (non-native wife with no non-native co- resident children)	42.3	39.9
<u>'Family mover'</u> (non-native wife, non-native co- resident children)	33.3	48.3
<u>Not known</u> (children's birthplace unclear : could be 'intermediate' or 'family mover')	4.1	2.7
	<hr/> 100.0	<hr/> 100.0
	(N=508)	(N=702)

Source: C.E.Bs.

- Notes:
- 1) A migrant is defined as someone born outside the respective study district.
 - 2) A 'native' wife is any wife born in one of the study townships.
 - 3) All cases where either spouse has an unidentifiable birthplace are excluded.

groups using the data in the two Tables. There are two problems here:

1) The 'Intermediate' category in Table 8.2 contains those married couples where both partners were migrants but which either had no co-resident children or where all such children were born in the study area. This class includes, therefore, those who moved in as

- childless married couples
- couples with children but whose migrant offspring had all since left home
- unmarried migrants (arriving either independently or with their parent(s)) who had subsequently married another migrant.

There is no way these three strands can be delineated, and so this category has been excluded from the following analysis. (This seems especially wise given the additional interpretative problem of whether the migration of childless married couples is best conceptualised as 'single' or 'family' movement.)

It could be objected here that the 'intermediate' category in either Grantham or Scunthorpe may contain enough additional men who were really single migrants to alter the relative overall importance of 'single' and 'family' in-migration. Given the early age at which most iron workers married, many single migrants to the Scunthorpe district perhaps married soon after their arrival. Yet this does not appear to be so. The 'intermediate' category is actually smaller in the Scunthorpe district than in Grantham (Table 8.2), so if a disparate proportion of these Scunthorpe cases were really single migrants, then the proportion who had moved in as childless married couples becomes inexplicably and inconceivably low.

2) Many migrants recorded as 'single' or as 'married to native females' may have originally moved in as dependent children and either since left home or

been orphaned. These two groups must accordingly be reduced by an appropriate amount in order to obtain a more accurate estimate of the number of independent single in-migrants. The calculation of this amount can be illustrated using Grantham males as an example. The relevant figures are shown in Tables 8.3(a) and (b).

The method assumes that dependent migrant children were as likely to leave home, or to be left behind by their out-migrating parents, as were their native counterparts. The first step is to calculate the ratio of those who were not living with either parent to those who were so living for unmarried natives in each age group. For example, taking natives aged 20–24 in Table 8.3(a), there were 11 single men not living with either parent and 47 who were so co-residing (columns a and b). Applying the same ratio to the 31 migrants living with either parent (column c) suggests there were 7 men aged 20–24 in the town who had originally in-migrated as dependents but who had since left or lost their parental home (column d). This amount is subtracted from the 54 enumerated migrants not living with their parents (column e) to arrive at an estimate of the ‘true’ extent of independent single in-migration among those aged 20–24, namely 47 (column f). Repeating the exercise for the other age-groups results in an overall estimate of 184 such migrants. Of course, this procedure only has any major impact among younger persons. There is no way of estimating how many older migrants had originally moved in as dependent children. Most older natives had left or lost their home, thus denying us of any real ‘correction factor’ to apply to the older single migrants. For this reason only those age groups under 30 are ‘corrected’ in this way. This is probably not so very harmful, as (all else being equal) older ‘single’ migrants would anyway be less likely to have originally moved in with their parents than would their younger counterparts. This probably applies to the Scunthorpe district cases rather more than the Grantham ones, given the

**TABLE 8.3 (a) WORKED EXAMPLE OF THE CALCULATION OF ESTIMATED
'SINGLE' MIGRATION, GRANTHAM UNMARRIED MALES, 1881**

<u>Age</u>	(a)	(b)	(c)	(d)	(e)	(f)
0- 9	457	24	145	8	25	17
10-14	141	5	87	3	13	10
15-19	100	17	61	10	49	39
20-24	47	11	31	7	54	47
25-29	20	5	6	2	30	28
> =30	12	18	10	N/A	43	43
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Total	777	80	340	30	214	184

KEY : (a) Single natives living with parent(s)
 (b) Single natives not living with parent(s)
 (c) Single migrants living with parents
 (d) 'False' independent single migrants (b/a x c)
 (e) Single migrants not living with parents
 (f) Corrected estimate of single migrants (e-d)

**TABLE 8.3 (b) WORKED EXAMPLE OF THE CALCULATION OF ESTIMATED
'SINGLE' MIGRATION, GRANTHAM MIGRANT MALES WITH
NATIVE WIVES, 1881**

<u>Age</u>	(g)	(h)	(i)
20-24	8	1	7
25-29	18	1	17
> =30	77	N/A	77
	<hr/>	<hr/>	<hr/>
	103	2	101

KEY : (g) Married male migrants with native wives
 (h) 'False' independent single migrants (d/e x g)
 (i) Corrected estimate of single migrants (g-h)

Source: C.E.Bs.

recency of the former area's expansion. It must be borne in mind, then, that the method may somewhat overestimate the importance of single migration into Grantham compared with that into the Scunthorpe district.

Attention now turns to those married migrants with native spouses. The proportionate reduction already made to the single migrants in each age group is now applied to the corresponding age-group in this population. For example, we made a reduction in the 20-24 age group from 54 to 47. Applying an equivalent reduction to the 8 cases aged 20-24 in Table 8.3(b) results in a revised figure of 7 cases. This is done for the other age groups and finally the sub-total in each part of the Table is summed to give an overall approximation of the total number of single men who arrived independently of their parents ($184+101=285$).

Finally, having obtained an estimate of the number of migrants who arrived in an independent, unmarried state, this can be compared with the numbers who moved in with their spouse and offspring. The former I have termed 'single' migrants, the latter 'family' migrants. The relative importance of these two types of movement among males and females is expressed in percentage form in Table 8.4. While male migration into Grantham largely followed an 'expected' pattern, with single movement predominant, the male stream into the Scunthorpe area was skewed quite markedly in the other direction, with family movement predominant. This difference was even more apparent when the whole exercise was repeated for females (Table 8.4 again).

The key to this difference probably lies in the economic structure of the two locations. This is evident from the age-structure of the 'single migrant' stream. Excluding those who had subsequently married native spouses, 35.9% of Grantham's (corrected) single migrant males were aged under 20, compared with only 17.6% of the Scunthorpe district cases. The figures for

TABLE 8.4 RELATIVE SIZE OF THE ESTIMATED 'SINGLE' AND 'FAMILY' MIGRANT GROUPS, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

	<u>Grantham</u>	<u>Scunthorpe district</u>
	%	%
(a) <u>MALES</u>		
'Single' migrants	62.8	45.5
'Family' migrants	37.2	54.5
	<hr/>	<hr/>
	100.0	100.0
	(N=454)	(N=622)
(b) <u>FEMALES</u>		
'Single' migrants	68.5	31.2
'Family' migrants	31.5	68.8
	<hr/>	<hr/>
	100.0	100.0
	(N=537)	(N=493)

Source: C.E.Bs.

- Notes:
- 1) A migrant is defined as someone born outside the respective study district.
 - 2) See text for an explanation of the 'single' and 'family' migrant categories.
 - 3) The total number of 'family' migrants is the same for both males and females, though of course the relative size of this group is different in each case.
 - 4) The differences between the two study locations are statistically significant:

Males : $\chi^2 = 31.43$, 1 degree of freedom, $p < 0.001$

Females: $\chi^2 = 143.00$, 1 degree of freedom, $p < 0.001$

TABLE 8.5 LABOUR FORCE PARTICIPATION RATES OF YOUNG PEOPLE
BY RESIDENTIAL STATUS, GRANTHAM SAMPLE AND FOUR
SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

	<u>Grantham</u>		<u>Scunthorpe district</u>	
	%	(N)	%	(N)
<u>Males aged 10-14</u>				
Co-resident with parent(s)	20.5	(234)	10.0	(260)
Not co-resident with parent(s)	26.3	(19)	47.1	(17)
<u>Females aged 10-14</u>				
Co-resident with parent(s)	4.1	(246)	2.0	(245)
Not co-resident with parent(s)	33.9	(56)	41.4	(29)
<u>Males aged 15-19</u>				
Co-resident with parent(s)	89.9	(169)	70.5	(112)
Not co-resident with parent(s)	88.8	(75)	94.7	(57)
<u>Females aged 15-19</u>				
Co-resident with parent(s)	52.6	(133)	38.3	(81)
Not co-resident with parent(s)	76.3	(156)	65.2	(66)

Source: C.E.Bs.

females were 49.0% and 38.2% respectively. A mature market town possessed many more job opportunities for young single people than did a nascent industrial area. Boys in their teens moved in to Grantham to take up apprenticeships, or for a position with a tradesman or at one of the many coaching inns. For girls, domestic service was the main attraction. A whole host of opportunities existed for young, single migrants. In comparison the Scunthorpe district had few such openings. Jobs in domestic service and trade and craft assistantships were scarce. The iron industry only employed strong, adult men, and no system of apprenticeship existed.

The existence of such employment can, however, be seen from another perspective. Work on the family economy has shown that the movement of families to a particular destination is often encouraged by opportunities for wives and children to contribute to the household budget. Such a phenomenon has been clearly observed among certain groups of textile workers in the nineteenth century.⁵ Yet this does not seem to apply here. According to my estimates, the destination with the least to offer in terms of family employment nevertheless experienced the most family migration. The economic activity rate among both women and co-resident children was higher in Grantham than in the Scunthorpe district (Table 8.5, and see Table 7.1 in Chapter 7). Further information on this subject comes from those migrants in the Scunthorpe district who were successfully traced to locations outside the area in the 1871 census. Of 34 men who were fathers in both years and who had not 'lost' any children between the two dates, only 5 (14.7%) had more children working in 1881 than in 1871. While it is not possible to set this figure in any comparative context, it does seem very low, especially considering that children would, anyway, be increasingly likely to start work as they became older. These two case studies suggest, then, that job opportunities for those in their teens worked to encourage single

in-migration more than it did the movement of families within any 'family economy' framework. In part this surely reflects the introduction of compulsory schooling in the 1870s, together with other legislation which took younger children out of the labour market. It may also reflect the absence of any major domestic industry in either location in which younger children could be employed at home.

It is worth pausing here to examine whether the presence of children had any real effect on migratory behaviour in contexts where family employment was of little importance. Implicit in some of the literature is the view that where children are not short-term economic assets, they are, instead, a disincentive to movement (excluding, of course, the special case of movement prompted by overcrowding).⁶ It is easier for a single person or childless married couple to uproot than it is for a whole family. There is some limited evidence which suggests this was indeed the case. Table 8.6 shows that children lower down the birth order were less likely to be migrants than their older siblings, although this is partly a function of age.⁷ It can also be argued that numerous children might prove especially discouraging to long-distance movement. Table 8.7 provides some pertinent evidence.⁸ Only the Grantham migrants from markedly longer distances display any tendency towards smaller mean family size, and this difference is not statistically significant. Yet when we turn to those couples who had over three co-resident children, a much clearer pattern emerges - though again the differences are small, statistically insignificant, and confined to those from the longest distances. The structure of movement into Grantham lends some support to a view of the debilitating influence of distance. Table 8.8 shows male 'single' migration to be slightly more pronounced among those from longer distances, even when this is defined as birthplaces of 50 kilometres or more away. (However, this difference is not statistically significant). But any such reluctance was

TABLE 8.6 CHILDREN CO-RESIDENT WITH ONE OR MORE PARENTS,
BY BIRTH ORDER AND MIGRATION STATUS, GRANTHAM
SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS,
1881

BIRTH ORDER OF CHILDMIGRANTS

	<u>Grantham</u>		<u>Scunthorpe</u>	
	%	(N)	district	(N)
<u>Children aged 0-4</u>			%	
1st or 2nd	20.4 ^a	(270)	29.7 ^o	(380)
3rd, 4th or 5th	14.9 ^b	(255)	17.6 ^d	(442)
<u>Children aged 5-9</u>				
1st or 2nd	42.4 ^e	(238)	53.0 ^h	(381)
3rd, 4th or 5th	28.2 ^f	(245)	48.0 ⁱ	(304)
6th or above	16.2 ^g	(37)	21.4 ^j	(14)

Source: C.E.Bs.

- Notes: 1) A migrant is defined as a child born outside the respective study districts.
- 2) Children with unidentifiable birthplaces were excluded from the analysis.
- 3) The following differences are statistically significant:

a/b : $\chi^2 = 2.69$, 1 degree of freedom, $p < 0.20$

c/d : $\chi^2 = 16.74$, 1 degree of freedom, $p < 0.001$

e/f/g : $\chi^2 = 16.51$, 2 degrees of freedom, $p < 0.001$

h/i/j : $\chi^2 = 6.42$, 2 degrees of freedom, $p < 0.02$

TABLE 8.7 **MIGRATION DISTANCE AND FAMILY SIZE: MIGRANT COUPLES
WITH CO-RESIDENT MIGRANT CHILDREN BY BIRTHPLACE
DISTANCE OF FATHER, GRANTHAM SAMPLE AND FOUR
SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881**

<u>Birthplace of father</u>	<u>Mean number of co-resident migrant children per couple</u>	<u>% of couples with over 3 co-resident migrant children</u>	<u>(N)</u>
<u>Grantham</u>			
1-49 km	2.2	18.2	{ 132 }
50-99 km	2.2	16.7	{ 30 }
>=100 km	1.9	12.9	{ 31 }
<u>Scunthorpe district</u>			
1-49 km	2.2	15.1	{ 252 }
50-99 km	2.2	16.3	{ 43 }
>=100 km	2.2	9.0	{ 67 }

Source: C.E.Bs.

- Notes: 1) A migrant is defined as someone born outside the respective study district.
- 2) Children with unidentifiable birthplaces were excluded from the analysis.

TABLE 8.8 **RELATIVE SIZE OF ESTIMATED 'SINGLE' AND 'FAMILY'**
MALE MIGRANT GROUPS, BY BIRTHPLACE DISTANCE,
GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT
STUDY TOWNSHIPS, 1881

	<u>BIRTHPLACE DISTANCE</u>	
	<u>1 - 49 km</u>	<u>>= 50 km</u>
<u>Grantham</u>		
'Single' migrants	60.2	66.0
'Family' migrants	39.8	34.0
	<hr/>	<hr/>
	100.0	100.0
	(N=299)	(N=147)
 <u>Scunthorpe district</u>		
'Single' migrants	45.5	45.2
'Family' migrants	54.5	54.8
	<hr/>	<hr/>
	100.0	100.0
	(N=433)	(N=188)

Source: C.E.Bs.

- Notes: 1) A migrant is defined as someone born outside the respective study district.
- 2) See text for an explanation of the 'single' and 'family' migrant categories.
- 3) Neither difference is statistically significant:

Grantham : $\chi^2 = 1.40$, 1 degree of freedom.

Scunthorpe: $\chi^2 = 0.00$, 1 degree of freedom.

TABLE 8.9 RELATIVE SIZE OF ESTIMATED 'SINGLE' AND 'FAMILY' MALE MIGRANT GROUPS WITHIN SELECTED OCCUPATIONS, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

	<u>OCCUPATIONS (%)</u>			
	<u>'Higher' iron workers^a</u>	<u>'Lower' iron workers^b</u>	<u>Iron Miners^c</u>	<u>Non-iron occupations^d</u>
'Single' migrants	37.3	51.4	36.0	55.4
'Family' migrants	62.7	48.6	64.0	44.6
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
	(N=59)	(N=107)	(N=172)	(N=148)

Source: C.E.Bs.

- Notes: 1) A migrant is defined as someone born outside the study district.
- 2) See text for an explanation of the 'single' and 'family' migrant categories.
- 3) The composition of the occupational groups is explained in Chapter 5.
- 4) The following pairs of differences are statistically significant:

a/b : $\chi^2 = 3.05$, 1 degree of freedom, $p < 0.10$

a/d : $\chi^2 = 5.53$, 1 degree of freedom, $p < 0.02$

b/c : $\chi^2 = 6.39$, 1 degree of freedom, $p < 0.02$

c/d : $\chi^2 = 12.04$, 1 degree of freedom, $p < 0.001$

The following pairs of differences are not statistically significant:

a/c : $\chi^2 = 0.03$, 1 degree of freedom

b/d : $\chi^2 = 0.40$, 1 degree of freedom

TABLE 8.10 LIFE CYCLE STAGE OF MIGRANT COUPLES WITH MIGRANT CHILDREN WHERE FATHER IS EMPLOYED IN THE IRON INDUSTRY, CONTROLLING FOR DATE OF ARRIVAL, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

Life-cycle stage (LCS)	<u>OCCUPATION (%)</u>		
	<u>'Higher' iron worker</u>	<u>'Lower' iron worker</u>	<u>Iron Miner</u>
<u>Couples who arrived within the last 5 years:</u>			
LCS 2 and 3	90.9	78.5 ^a	62.8 ^b
LCS 4	9.1	21.4	37.2
	<hr/> 100.0	<hr/> 99.9	<hr/> 100.0
	(N=11)	(N=28)	(N=43)
<u>Couples who arrived 5 to 10 years ago:</u>			
LCS 2 and 3	41.2 ^c	47.1 ^d	31.4 ^e
LCS 4	58.8	52.9	68.6
	<hr/> 100.0	<hr/> 100.0	<hr/> 100.0
	(N=17)	(N=17)	(N=35)

KEY : LCS 2: Married couple, wife under 45, one co-resident child under 1
 LCS 3: Married couple, all children under 10 (but not if LCS2)
 LCS 4: Married couple, some children under 10, some over 10.

Source: C.E.Bs ; for life-cycle stage schema see Collins (1979), p.216.

- Notes:
- 1) A migrant is defined as someone born outside the study district.
 - 2) The composition of the occupational groups is explained in Chapter 5.
 - 3) The life-cycle stage schema includes all children, irrespective of birthplace.
 - 4) The following pair of differences is statistically significant:
 a/b : $\chi^2 = 1.98$, 1 degree of freedom, $p < 0.20$
 The following pairs of differences are not statistically significant:
 c/d : $\chi^2 = 1.21$, 1 degree of freedom
 d/e : $\chi^2 = 0.12$, 1 degree of freedom

TABLE 8.11 **RELATIVE SIZE OF ESTIMATED 'SINGLE' AND 'FAMILY' MALE MIGRANT GROUPS IN SELECTED OCCUPATIONS, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881**

	<u>Grantham</u> <u>All occupations^a</u>	<u>Scunthorpe district</u> <u>Agriculture^b</u>	<u>Other non-iron^c</u>
'Single' migrants	62.8	59.2	51.4
'Family' migrants	37.2	40.8	48.6
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
	(N=454)	(N=76)	(N=72)

Source: C.E.Bs.

- Notes:
- 1) A migrant is defined as someone born outside the respective study district.
 - 2) See text for an explanation of the 'single' and 'family' migrant categories.
 - 3) The following pair of differences is statistically significant:

a/c : $\chi^2 = 3.40$, 1 degree of freedom, $p < 0.10$

The following pairs of differences are not statistically significant:

a/b : $\chi^2 = 0.35$, 1 degree of freedom

b/c : $\chi^2 = 0.91$, 1 degree of freedom

overcome by many longer-distance movers to the Scunthorpe district, where 'family' migration appears to have been equally marked among those from nearby and further afield.

Table 8.9 breaks down the Scunthorpe area data into selected occupational groups. With the exception of the 'lower' iron workers, the skew towards 'family' migration is more evident among those engaged in the iron industry than among those in other occupations. The considerable variation among the iron employees is very probably a function of the deployment of labour within the industry. The popularity of 'lower' iron work among younger men and of iron mining among older men has already been noted in Chapter 6. (Table 8.10 reveals this trend even within the 'family migrant' category itself, although most of the differences are not significant in the statistical sense). A similar pattern appears to have occurred among those employed outside the industry (Table 8.11). Agriculture is one of the few sectors in the district employing single males in their teens (usually as farm servants). Hence this group is less skewed towards 'family migration' than other non-iron groups, though the difference between the two categories is not statistically significant. Indeed, the pattern for Scunthorpe district agricultural workers was scarcely different from that for Grantham as a whole. (Too few Grantham engineering cases exist for an occupational breakdown to allow detailed analysis. The greater propensity to family movement among engineering workers is probably a function of the age distribution of employment. See Table 8.12).

Other factors may also have worked to encourage a high level of 'family' movement into the Scunthorpe district. For one thing, in these early years of the north Lincolnshire iron industry, the demand for labour far outstripped the local supply. In Chapter 6 it was shown how the iron companies had to venture beyond the immediate countryside to fill even their least skilled

TABLE 8.12 RELATIVE SIZE OF ESTIMATED 'SINGLE' AND 'FAMILY' MALE MIGRANT GROUPS WITHIN SELECTED OCCUPATIONS, GRANTHAM SAMPLE, 1881

	<u>OCCUPATION (%)</u>		
	<u>'Skilled'</u> <u>engineering^a</u>	<u>'Less skilled'</u> <u>engineering^b</u>	<u>Non-</u> <u>engineering^c</u>
'Single' migrants	48.7	46.7	62.2
'Family' migrants	51.3	53.3	37.8
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
	(N=39)	(N=15)	(N=275)

Source: C.E.Bs.

- Notes:
- 1) A migrant is defined as someone born outside the study district.
 - 2) See text for an explanation of the 'single' and 'family' migrant categories.
 - 3) The composition of the occupational groups is described in Chapter 7.
 - 4) The following pair of differences is statistically significant:

$$a/c : \chi^2 = 2.59, 1 \text{ degree of freedom, } p < 0.20$$

The following pairs of differences are not statistically significant:

$$a/b : \chi^2 = 0.02, 1 \text{ degree of freedom}$$

$$b/c : \chi^2 = 1.45, 1 \text{ degree of freedom}$$

TABLE 8.13 RELATIVE SIZE OF ESTIMATED 'SINGLE' AND 'FAMILY'
MIGRANT GROUPS, MALES IN SELECTED BIRTHPLACE
CATEGORIES, FOUR SCUNTHORPE DISTRICT STUDY
TOWNSHIPS, 1881

	<u>BIRTHPLACE</u>	
	<u>Staffordshire and Worcestershire</u>	<u>Other locations ≥ 50 km</u>
'Single' migrants	34.5	47.2
'Family' migrants	65.5	52.8
	<u>100.0</u>	<u>100.0</u>
	(N=29)	(N=159)

Source: C.E.Bs.

- Notes: 1) See text for an explanation of the 'single' and 'family' migrant categories.
- 2) The difference between the two distributions is not statistically significant:
 $\chi^2 = 1.59$, 1 degree of freedom.

vacancies. The growing port of Grimsby to the east and industrial south Yorkshire to the west were both competing destinations for the young single men of the north Lincolnshire countryside. So, too, was nearby Gainsborough with its expanding engineering works.⁹ The relative importance of families within local migration streams may partly reflect a deficient pool of single men.

Turning to those from longer distances¹⁰, and in particular those from other centres of the iron industry, other factors may have prevailed. First, the movement of families is sometimes taken to indicate a less favourable economic climate in the place of origin than that which attends single migration. Thus J.T. Jackson has observed of the early Victorian glass industry:

The overall movement pattern between about 1830 and 1851 was very much a one-way flow of glass makers of all ages from declining to new, expanding regions of glass-making: so-called established, stable areas of production did not exist to provide a surplus pool of skilled unmarried men who might move in search of better job opportunities, as appears to be the case in the iron-making and coal industries'.¹¹

Whether the iron industry had previously operated in this manner is debatable. What is clear, however, is that by the 1870s such 'stable areas of production' were less widespread. The shift of the main centres of the industry to Cleveland and north Lancashire was accompanied by a decline elsewhere. The Black Country, in particular, experienced a period of contraction at this time.¹² Some very limited evidence on this point is given in Table 8.13. The number of cases is small, and the difference not statistically significant. Nevertheless, the Table does suggest that 'family' migration was relatively more common from the Black Country than it was from other longer-distance sources. Furthermore, the true level of 'family' movement is probably understated, as other families had also lived in that region according to the

birthplace information of their children.

Secondly, it has already been argued that mobility was almost a cultural trait among many iron workers in the nineteenth century (Chapter 6). For many men in the industry, family mobility was probably regarded with less disfavour than among many other groups of workers. Indeed, the absence of employment opportunities for females and children in most areas of heavy industry¹³ may well have made such movement more easy. The family was not having to surrender two, three or even more sources of income in the hope of a better deal elsewhere. Within the confines of the family budget, the only economic consideration was the relative employment prospects of the breadwinner in his present situation compared with another somewhere else. The very absence of any broadly-based family economy in many of these sending districts, then, may well have been as much a spur to family migration as its presence seems to have been in other places.

Thirdly, a low age at marriage was a national characteristic of iron workers.¹⁴ This means the pool of potential migrants in an iron district probably contained proportionately more families and correspondingly fewer single adults than did other areas. From a different perspective, the tendency to earlier marriage reflects the important role played by the wives of iron workers. The nature of the work was such that domestic duties were even more arduous than in some other working class households. The job was extremely dirty: wash day would be harder work than in other households; the long, unsociable shifts worked by the men enhanced the importance of a good domestic manager in the home. On the one hand, this meant that iron workers would be keen to find a good wife as soon as possible while, for their part, marriage was the easiest means available to most girls in iron working families of achieving some degree of independence from home. On the other hand, the high fertility of heavy industrial workers (in part a result

of the low marriage age) meant that many families would experience a succession of older sons taking up employment in the industry. Although these sons contributed to the family coffers, the domestic strain must nevertheless have become immense. Within the space of a few years, the work-load of many wives and mothers suddenly increased markedly, just as they themselves were aging. The daily routine was even more irksome if father and sons did not all share the same shift. Given such pressures, it would not be surprising if many young men were obliged and expected to relieve their mother by finding a wife as soon as possible. A report from early this century commented that:

The young man of the iron-working class usually has no misgivings about embarking upon matrimony early and without a sufficient income. He marries very young, often because he wants a home of his own. Either he is in his parents' home, where he is of course not the principal person to be considered, and is set on one side perhaps and has to undergo the discomfort and crowding entailed by being one of a family living in a small cottage; or he is a lodger, under much the same conditions'.¹⁵

The importance of having a wife (and thus usually a family) was, perhaps, enough to outweigh the hindrance to mobility which dependents might have presented. Indeed, many iron workers might well have been reluctant to move very far without one.¹⁶

More generally, the movement of families over long distances may well have been more prevalent within the context of Redford's 'special industrial migration'.¹⁷ All else being equal, the links between areas sharing a common form of industrial activity were likely to be stronger than those between other areas. The network of information which serviced migration was probably better developed; the body of knowledge concerning the conditions at a certain destination all that more comprehensive. A man with a family would be less keen to uproot on the basis of mere hearsay. The evidence on this

TABLE 8.14 RELATIVE SIZE OF THE ESTIMATED 'SINGLE' AND 'FAMILY'
MIGRANT GROUPS AMONG MALES BORN 50 KILOMETRES
OR FURTHER AWAY, BY OCCUPATIONAL SECTOR,
FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

	<u>OCCUPATION (%)</u>	
	<u>Manual iron</u>	<u>Non-iron</u>
'Single' migrants	45.0	41.4
'Family' migrants	55.0	58.6
	<u>100.0</u> (N=109)	<u>100.0</u> (N=29)

Source: C.E.Bs.

- Notes: 1) See text for an explanation of the 'single' and 'family' migrant categories.
- 2) The difference between the two distributions is not statistically significant:
 $\chi^2 = 0.12$, 1 degree of freedom.

point is unclear, but certainly does not rule out such an interpretation. It might be expected, for example, that 'family' migrants would originate from a more narrow range of communities than did single men. Although no such behaviour can be discerned in the Grantham data, such a pattern is evident among the Scunthorpe district cases: 220 identifiable birthplaces supplied, on average, 1.52 single migrants each; 195 birthplaces provided, on average, 1.74 family migrants. (The figures for Grantham are 1.39 and 1.32 respectively). Evidence to the contrary is provided in Table 8.14. This shows that among longer-distance migrants those Scunthorpe district males employed outside the iron industry were equally - if not even more - predominantly 'family migrants'. However, on closer inspection it can be seen that the number of cases is too small to be really meaningful. For what it is worth, the pattern shown can probably be explained wholly in terms (again) of the lack of job opportunities for young males in the district. Nearly all of these cases were aged 20 and above (12 of the 14 'uncorrected' single migrants).

* * * * *

The material presented in this chapter only allows the most tentative of interpretations. Much comment has been based on very rough estimates indeed. Those tables which contain a small number of cases are particularly suspect. Nevertheless, the evidence does seem to suggest that the composition of migrant streams could differ quite considerably between one destination and another, and that in certain circumstances married couples with children may even have outnumbered independent single migrants. Furthermore, the extent of family migration could be high even into those areas with poor employment prospects for wives and children. In sum, it would seem that the movement of families was indeed of major significance in some areas of nineteenth century Britain, but, also, that this was not always a function of the 'family economy' conceived in the narrow sense of

the employment of family members beyond the head.

CHAPTER 9. INTEGRATION AND THE MIGRANT EXPERIENCE

Victorian migration was a largely silent phenomenon. Modern scholars must trace its occurrence through discrepancies between published census entries and published vital statistics, or between enumerated place of residence and place of birth. Beyond this it has left little trace. No register of mobility has ever been kept in Britain outside war time. And compared with the other three demographic events of birth, marriage and death, migration carries little overt cultural significance within most of the societies in which it occurs. While the sudden growth or decline of particular settlements could excite much comment, little is known about the actual experience of an event which happened to well over half the population at some time in their lives.

This chapter attempts to piece together as much of this experience as the sources will allow. It uses the 1881 census data to explore the behaviour of those who moved into the two case study locations. It takes as its starting-point existing work on the 'assimilation' or 'integration' of newcomers into nineteenth century urban environments.

* * * * *

Many scholars have emphasised what they have believed to be the traumatic experience of migration, particularly for those moving from countryside to town. For example, Checkland has written that

'A family dwelling in an industrial town found itself not only divorced from nature and from the particular place of its origins, but cut off from other families'.¹

In similar vein, the disadvantaged position of the rural migrant in the urban factory job market has been stressed.² In Bedford between 1841 and 1871, the immigrant was

'economically and socially at variance with his host community'

and residential segregation occurred:

'With increasing urban scale and social anonymity newcomers were less willing to live alongside families of different status'³

Thus clearly defined 'newcomer zones' grew up.⁴ Similarly, Anderson has stated that 'migrants did face problems in adapting to town life' and that kin were of the utmost importance in assisting the process of assimilation.⁵ Although many from rural Lancashire were partly familiar with town life,

'For some of the migrantsthe shock when faced with the need to make one's way in a large town must have been considerable ...'

He goes on to suggest that those from remoter parts of the county were particularly bewildered.⁶

However, this more traditional view of the displaced rural dweller has been subject to revision. Recent investigations have stressed instead how well migrants managed to cope with town life. There are three elements within this perspective.

First, similarities between the behaviour of migrants and natives within the towns have been suggested. Anderson has more recently written that:

'Very often the most noticeable feature of the many tables which compare the position of migrants and non-migrants seems to be the relative smallness of the differences between the groups. Rather than inferring either degeneracy or problems of adaptation might not the more logical first conclusion be the apparent ease with which most migrants integrated into an urban culture and the most interesting questions not why they were so much better or so much worse but why they were so much the same?'⁷

He presents tabulations of migrants by socio-economic groups, household

structure and age-heaping from a country-wide sample of the 1851 census, all suggesting that only Irish migrants were markedly different in their behaviour from natives.⁸ Banks has emphasised such similarity in a rather different way:

'it was exceptional for migrants to carry their way of life into a town, in the sense of it remaining an abiding source of strength and separateness. Rather, was it that the town's way of life became theirs'.⁹

Secondly, however, a variant to this has been argued. This viewpoint sees the migrant groups as preserving their identity within the new urban environment, but utilizing this cohesion to assimilate in other ways. Pooley's analysis of Welsh migrants to English towns found that

'..although well-assimilated into the economic structure of towns in north-west England, the Welsh managed to live in two culture worlds, maintaining their links with rural Wales whilst at the same time being accepted by the host society'.¹⁰

They achieved this cultural and social separateness through inter-marriage, taking in their compatriots as lodgers and servants, residential segregation, visits home, return migration, labour recruitment from the communities of origin, and – most important – forming their own distinct cultural life around their own chapels.¹¹ The Welsh achieved economic assimilation through their cultural cohesion – which, paradoxically, prevented their cultural assimilation. A similar process can be found elsewhere. Irish migrants to Dundee were able to 'carry over' their cultural and household-economic traditions from their origin to their destination. In Paisley, however, such a mesh of culture and economy could not be sustained.¹²

Lastly, it has been questioned whether village life really was so inadequate a preparation for urban existence. In some cases, the attributes of village life could be a boon rather than a hindrance within the urban job market.¹³ Hodge

was not so inept after all. Moreover, the non-agricultural background of many rural migrants has been noted.

Two problems emerge from all these points. First, behind most of these observations there lurks a kind of 'ideal type' of Victorian migrant who moved from an isolated, backward, agricultural village to a vast, anonymous, exciting industrial town. But what of those who moved into different kinds of destination, such as Grantham and the Scunthorpe district in the 1870s and 1880s? Did they too face problems of 'assimilation'? If so, how well did they overcome them?

Second, it is by no means clear how 'assimilation' or 'integration' to an urban environment can best be defined and measured. Topics explored have largely been determined by the sources available. With little exception this has meant the census, so attention has focused on residential differentiation and neighbouring, patterns of co-residence, occupation, previous residence and population turnover as measures of integration. The wider aspects of cultural and social behaviour have to be deduced from such material. Some information can be culled from sources like newspapers, sanitary reports and criminal records, but these tend to favour the more 'culturally visible' groups like the Irish.¹⁴ Interpreting the evidence is also problematic: it is unclear whether such aspects of behaviour as residential clustering or working in a 'rural' type of job should be seen as a means of integration or the outcome of a failure to assimilate.

Ultimately, of course, the experience of being a migrant in any location cannot be assessed in these measurable terms. Lacking the testimony of the bulk of the migrants themselves, we can only guess what it might have felt like. Common sense might suggest that the degree of social anonymity in a county town like Grantham would have been much less than in one of the

'shock cities' of the industrial revolution. Yet it might have taken much longer to gain acceptance in a close-knit, small-town society than in the sprawling mass of a large city. The nature of life in the Scunthorpe district is even harder to assess. The bulk of the population were migrants, and there was no vast urban fabric to come to terms with. To what, then, were the migrants assimilating?

Such fundamental questions cannot be answered. All that can be done is to survey the evidence that exists and attempt a tentative appraisal of the problems migrants faced and how well these were overcome.

* * * * *

1. Occupation

Chapter 6 showed how the occupational structure of the north Lincolnshire iron district was clearly differentiated by migration status. Iron mining bore a greater similarity to farm labouring than did other jobs in the industry, and was thus the preference of most of those who moved in off the land. It was further suggested that this had as much to do with the wider culture and organisation of the different jobs on offer as it did with levels of skill and experience. In Grantham, too, many skilled engineering workers came from urban and long-distance localities, while most labourers were from local villages (Chapter 7). Migrants from rural areas were better-represented in certain occupations like domestic service than in others like certain trades. Here, then, is a firm indication of migrants behaving in ways determined by their past experiences. But whether this behaviour should be seen as a means of integration or as evidence of a failure to integrate is uncertain.¹⁵

2. Patterns of residence

Residential segregation has been the most widely-used measure of migrant integration to new surroundings. Spatial separateness is taken to denote social isolation, a failure to assimilate. This section explores this topic in the context of the two study locations in 1881. It will be shown that such an investigation is of very limited use when dealing with small sub-populations and, further, that many of the standard measures and techniques possess limited applicability outside the large industrial city.

Most work has focused upon the Irish, who exhibited a high degree of residential segregation throughout the nineteenth century.¹⁶ The spatial distributions of other prominent minorities such as the Welsh, the Scots and foreign immigrants have also been explored. In these studies different migrant cultures are defined primarily by common ethnicity. Yet what is surely important is the variety of cultural experience which might arise out of different rural backgrounds with a common ethnicity. Not surprisingly, Pooley found that 'English migrants' as an aggregate group showed no cultural cohesion in the Liverpool of 1871, and that they possessed a socio-demographic profile similar to that of the native population.¹⁷ The interesting point, of course, is the extent to which various migrant streams maintained a common cultural identity manifested in their behaviour. To see 'English' migrants as one ecological unit forbids such an investigation.

The few attempts to probe more deeply among the English-born have reached differing conclusions. In his study of Hull in 1851, Tansey found that migrants from different parts of England showed little tendency to cluster.¹⁸ A

study of the Dales-born cowkeepers in Liverpool similarly found little evidence of residential clustering.¹⁹ On the other hand, Wheatley found that parts of Merthyr Tydfil in 1851 were strongly associated with particular birthplace groups, partly related to the direction of the source from the town.²⁰ Mid-Victorian Huddersfield also witnessed segregation among even relatively short-distance migrants from Sowerby Bridge and Kendall, and Bedford witnessed a similar phenomenon.²¹ In Preston in 1851, certain streets had a connection over time with particular villages.²²

Several problems arise here. First, there is the lack of any really meaningful way of delineating a migrant population whose members possessed a broadly common 'ethnicity'. For example, while regional background must have affected patterns of speech and habit, there is no systematic means of grouping people on such a basis; county of birth is perhaps the best approximation. 'Birthplace distance' is another flawed category: all else being equal, there is little reason for a person to feel any cultural affinity with another solely on the basis of both having moved in from afar. Two long-distance sources may well possess an even greater distance between each other. The most valid means of differentiation within the English migrant stream is by individual birthplace or group of birthplaces. Many people born in the same community probably moved in together, or as part of a chain of movement. It seems likely that most people would have felt some affinity with co-villagers and co-townsmen, although it is impossible to isolate all those who were also kin. The technical problem with such a basis of classification is that it results in a very small number of cases in each sub-group. Except for a handful of local villages and small towns, hardly any communities could claim to be the birthplace of more than a few household heads in either of my two study locations.

Second, the scale of analysis can have a profound effect on the measurable

extent of segregation. Historical geographers have organised the manuscript census data using various units: neighbourhoods, enumeration districts, 200-metre grid squares, individual streets, groups of houses and individual neighbours.²³ Results depend on the scale used. For example, work on social class in Merthyr Tydfil has shown that enumeration districts and grid squares with no strong social tone could nevertheless contain marked residential segregation at street level: higher-status households lived in main streets and lower-status households down side-streets.²⁴ The problem is compounded in the two case studies because no common unit of analysis is available for both locations; the only exception is the township, too large a unit for detailed measurement. The available units are as follows:

- Enumeration districts. The Grantham sample data are organised into 20 enumeration districts, but in the Scunthorpe district these are synonymous with townships, except for Scunthorpe itself which covered two districts.
- Streets. Individual streets are clearly marked in the Grantham schedules, but only in some of the Scunthorpe district settlements.
- Neighbours. No house numbers are given in the Scunthorpe district, and neighbours have to be identified using the order of enumeration, though this can be of dubious reliability. House numbers are clearly shown in Grantham but the systematic method of sampling excludes all immediate neighbours from the data set.

A related problem concerns the most appropriate measure of residential clustering to use. The most popular have been location quotients and indices of dissimilarity and segregation. All these, however, are strongly influenced by the scale of analysis and the number of cases involved.²⁵ In addition, they only really take on meaning when used to compare different groups: as absolute measures they lose much of their significance. The variable data units and small sub-populations available here renders them of limited use in this study.

Lastly, birthplace is not the sole determinant of spatial patterns. Other factors can also influence where a person lives. These include age, stage in the life-cycle, family structure, occupation, social class, the structure and working of the housing market, and where people have lived in intervening periods. Many scholars acknowledge this complexity by specifying multivariate models of explanation; some take this further by using techniques based on clustering, orthogonality and common variance.²⁶ It seems fair to say, however, that the results have been less than profound, and we are little nearer to a specification of the relative importance of background as an influence on spatial patterns. Such techniques, moreover, require a fairly uniform unit of analysis and reasonably large populations. Neither condition is met here. To use such methods would be an exercise in spurious specificity.

The case study material, then, will not bear systematic analysis in the fashion of many geographical enquiries. Instead, a far more limited and illustrative discussion must be attempted, using a mixture of groupings, levels and measures. There are two related problems. First, were migrant origins an important source of residential differentiation in Grantham and the Scunthorpe district? Second, were there any differences in this respect between different migrant groups?

Turning first to Grantham, Table 9.1 provides some material on the spatial distribution of household heads born in different birthplace distance categories. At enumeration district level there seems to be very little tendency for migrants grouped in this way to coalesce in particular areas of the town. This is perhaps unsurprising, given the comments above concerning the weakness of migration distance as a basis of classification. County of birth is, perhaps, a rather more valid criterion. Unfortunately, very few counties outside Lincolnshire were well-represented in the sample of

TABLE 9.1 LOCATION QUOTIENTS OF HOUSEHOLD HEADS (BOTH SEXES) IN PRIVATE DWELLINGS BY MIGRATION STATUS, GRANTHAM SAMPLE 1881

<u>Township</u>	<u>Enumeration district</u>	<u>Birthplace of household head</u>			
		<u>Natives</u>	<u>1-49 km</u>	<u>50-99 km</u>	<u>>= 100 km</u>
<u>Grantham</u>	1	1.09	0.96	1.51	0.52
	2	0.89	1.08	1.24	0.43
	3	1.26	1.00	0.46	0.74
	4	1.12	0.46	2.71	0.90
	5	1.13	1.04	0.53	1.07
	6	1.09	0.96	1.20	1.03
	7	1.43	0.85	0.33	1.39
<u>Manthorpe-cum-Little Gonerby</u>	8	0.89	1.02	1.35	1.46
	9	1.23	0.93	1.11	0.96
	10	0.92	1.07	0.72	1.04
	11	1.50	1.04	0.57	0.70
<u>Spittlegate</u>	12	0.81	1.12	0.71	0.43
	13	0.89	1.04	0.83	1.51
	14	0.54	1.34	1.38	0.48
	15	0.57	1.02	1.56	1.32
	16	0.88	1.04	0.44	0.89
	17	1.20	0.92	0.87	0.53
	18	1.01	0.89	0.79	1.92
<u>New Somerby</u>	19	0.70	1.15	1.38	1.11
<u>Harrowby</u>	20	0.68	0.34	1.47	1.78
		(N=252)	(N=491)	(N=115)	(N=95)

Source: C.E.Bs.

- Notes: 1) A native is defined here as someone born outside the study district (i.e. Grantham Municipal Borough).
- 2) The location quotient is the percentage of the sub-population in a given area expressed as a proportion of the percentage of the total population in that area.
- 3) County centroids are used to classify those heads for whom only county of birth is known.

TABLE 9.2 OCCUPATIONAL STRUCTURE OF HOUSEHOLD HEADS . (BOTH SEXES)
IN PRIVATE DWELLING HOUSES BORN IN LEICESTERSHIRE
AND NOTTINGHAMSHIRE, GRANTHAM SAMPLE 1881

<u>Occupation</u>	<u>Birthplace</u>	
	<u>Leic.s</u>	<u>Nott.s</u>
Engineering	14.3	18.2
Craft, possibly engineering	7.8	6.1
Labourers, unspecified and miscellaneous	9.1	9.1
Craft	22.1	13.6
Railway	2.6	4.5
Hotel/inn/accommodation trade	-	-
Other trade/commerce	18.2	24.2
Agriculture	10.4	3.0
Domestic service	3.9	4.5
Clerical	1.3	1.5
Public service, police	-	1.5
Army	-	1.5
Art/entertainment	-	-
Professional/legal/medical/clergy	1.3	1.5
Education	-	3.0
Other	9.1	7.6
	<u>100.1</u>	<u>99.8</u>
	(N=77)	(N=66)

Source: C.E.Bs.

Note: See notes to Table 7.4

Grantham households. The only exceptions were nearby Leicestershire and Nottinghamshire, with 77 and 66 heads respectively. Comparing the location of these two groups of heads across the 20 enumeration districts yields an index of dissimilarity of 35.49 in a range of 0 (distributions identical) to 100 (distributions totally separate). It is difficult to interpret this figure in absolute terms. No other counties outside Lincolnshire supplied enough heads to allow any meaningful comparisons. Lincolnshire-born migrant heads record a much lower value when set against either group, but this is probably an artefact of the much larger number of cases in this group: there were so many Lincolnshire heads that isolation from them was difficult. A figure of 30 or above has been cited as clear evidence of segregation, but as Dennis points out 'this figure is quite arbitrary and its significance depends on the scale for which it is calculated'.²⁷ Comparable indices between the Irish and various groups of mainland migrants in Cardiff, Liverpool, Huddersfield and Hull in various census years lie between 41 and 78.²⁸ Thus while heads born in the two counties were partially segregated from each other, the extent of this segregation was not very profound. Moreover, it may well be an artefact of occupation. Table 9.2 shows that the occupational structure of those born in the two counties was different, though perhaps not drastically so. Whatever, the number of cases is too small to allow for occupation to be controlled.

Using individual streets as the unit of analysis permits examination of the smaller groups of heads born in other counties. Of 265 Grantham heads born outside Lincolnshire in counties in which 10 or more sample heads had been born²⁹, no fewer than 39.6% were living in the same street or yard as another sample head born in the same county. As this is only sample data, the true figure was doubtless even higher. But few of these heads had common birthplaces, so that many with the same county of birth were probably

complete strangers. Only Nottingham, Newark and London were represented by 10 or more heads in the Grantham sample. Some local birthplaces were better represented. Six Lincolnshire communities were the birthplaces of 10 or more sample heads, accounting for 82 heads altogether. Of these, 12.2% were living in the same street, court or yard as a sampled co-villager or co-townsman. Again, the sample nature of the data means this figure is probably an underestimate. Unfortunately, the 187 separate streets, courts, yards and other addresses recorded in Grantham varied widely in size, forbidding any meaningful comparison with a random distribution of heads. As most of the 12.2% were living in the larger streets, the figure is not very impressive.

In the Scunthorpe district, migrants as a whole possessed a very different spatial profile to natives. Table 9.3 shows them to be most dominant in those settlements where the rate of residential and/or industrial growth was greatest (see Chapter 5, Figure 5.1).³⁰

Within each settlement, households listed sequentially within the same street in the enumeration book have been assumed to be neighbours. This is not necessarily true, as census enumerators often rearranged their schedules to fit complete households onto each page of the enumerators' book. Yet even if such juggling did occur, successively listed households were likely to have been near-neighbours if not actual ones.³¹ Taking each migrant head in turn, the birthplace of his or her two 'neighbours' can be compared with the birthplace of another head selected at random from all those in the same settlement.³² First, the distances between each migrant head's birthplace and those of his/her two 'neighbours' were calculated. Selecting just the shorter of these two distances gave a mean of 43.5 kilometres across all the cases³³, while the mean distance between each such head and his/her randomly-matched head was 75.7 kilometres. This difference is statistically

TABLE 9.3 LOCATION OF HOUSEHOLD HEADS (BOTH SEXES) IN PRIVATE DWELLINGS, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881 (%)

<u>Location</u>	<u>All heads</u>	<u>Native heads</u>	<u>Migrant heads</u>
Ashby	29.7	52.6	26.4
Brumby	3.3	6.6	2.7
Frodingham	6.8	5.8	6.9
New Brumby	4.4	2.9	4.7
New Frodingham	17.2	6.6	18.8
Scunthorpe E.D.1	24.5	16.8	25.6
Scunthorpe E.D.2	14.1	8.8	15.0
	<hr/>	<hr/>	<hr/>
	100.0	100.1	100.1
	(N=1038)	(N=137)	(N=888)

Source: C.E.Bs.

- Notes:
- 1) A native head is defined here as a household head born in any of the four townships. A migrant head is someone born outside the study district.
 - 2) The sum of native and migrant heads is less than the total of the first column as those cases with unknown county of birth are excluded from the second two columns.
 - 3) Scunthorpe townships was enumerated in two districts.

TABLE 9.4 PATTERNS OF NEIGHBOURING AMONG HOUSEHOLD HEADS IN PRIVATE DWELLINGS, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

<u>Birthplace of migrant head</u>	<u>Mean Distance Between Birthplaces (km)</u>	
	<u>Shortest distance of two neighbouring heads</u>	<u>Randomly-selected household heads</u>
1 - 49 kilometres	20.5 ^a (N=400)	53.5 ^b (N=534)
50 - 99 kilometres	61.0 ^c (N=56)	87.9 ^d (N=71)
>= 100 kilometres	131.3 ^e (N=94)	167.1 ^f (N=120)

Source: C.E.Bs.

- Notes:
- 1) See text for method of analysis and definition of 'neighbour'.
 - 2) Only those heads and neighbouring heads with identifiable birthplaces were included in the analysis.
 - 3) The following pairs of differences are statistically significant, by a one-tailed test:

a/b : $t = 8.99$, 932 degrees of freedom, $p < 0.0005$

c/d : $t = 3.67$, 125 degrees of freedom, $p < 0.0005$

e/f : $t = 3.14$, 212 degrees of freedom, $p < 0.005$

TABLE 9.5 PATTERNS OF NEIGHBOURING AMONG HOUSEHOLD HEADS IN PRIVATE DWELLINGS, FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

<u>Birthplaces of ≥ 10 heads</u>	<u>Number of heads</u>	<u>% of all heads (N=1038)</u>	<u>Approximate expected % of heads with ≥ 1 co-villager/ townsman neighbour</u>	<u>Observed % of heads with ≥ 1 co- villager/ townsman neighbour</u>
<u>Lincolnshire</u>				
Althorpe	13	1.3	2.3	- (N=10)
Barnetby le Wold	10	1.0	1.7	33.3 (N= 6)
Barton on Humber	10	1.0	1.7	- (N= 6)
Bottesford	13	1.3	2.3	- (N= 7)
Broughton	10	1.0	1.7	- (N= 6)
Burringham	23	2.2	4.2	15.4 (N=13)
Caistor	13	1.3	2.3	- (N= 8)
Crosby	20	1.9	3.7	- (N= 5)
Crowle	11	1.1	1.9	25.0 (N= 8)
Flixborough	10	1.0	1.7	- (N= 7)
Hibaldstow	14	1.3	2.5	- (N=11)
Kirton Lindsey	17	1.6	3.1	- (N=13)
Messingham	24	2.3	4.4	- (N=16)
Scawby cum Sturton	10	1.0	1.7	25.0 (N= 8)
Scotter	10	1.0	1.7	- (N= 6)
Winteringham	14	1.3	2.5	16.7 (N=12)
Winterton	17	1.6	3.1	- (N=13)
Total	239	23.0	2.8 ^a	6.5 ^b (N=155)
<u>Essex</u>				
Great Sampford	10	1.0	1.7	85.7 (N= 7)

Source: C.E.Bs.

- Notes:
- 1) The number of cases in the last column is less than the total number of heads (first column) owing to the stringent definition of 'neighbours'. See text.
 - 2) Great Sampford is included as the only source of 10 or more household heads among all individual settlements outside Lincolnshire.
 - 3) The difference a/b is statistically significant $\chi^2 = 3.19$, 1 degree of freedom, $p < 0.10$.

significant.³⁴ It persists, moreover, when the birthplace distance of the household head is controlled for (Table 9.4), suggesting this was not confined to any particular migrant group.

This tendency to cluster is less striking when the individual birthplaces of neighbours are compared. Table 9.5 presents the figures for all communities in which 10 or more heads were born. Taking the Lincolnshire birthplaces as a whole, neighbouring was slightly – but not much – higher than might have been expected on a random basis.

In both places, then, there seems to have been some slight tendency for co-villagers and townsmen to cluster together, although the Grantham evidence is particularly vague. The Scunthorpe district material suggests that any such tendency was as strong among those from afar as among more local movers. But four major qualifications must be recorded here. For one thing, birthplace is a very crude proxy for immediate origins. Second, however strong the tendency, most migrant heads did not live next door to – or even in the same street as – someone with the same birthplace. Clustering was a minority activity, and its significance must therefore be questioned. Thirdly, the extent to which spatial patterns can truly reflect social relationships must remain unclear.³⁵ Lastly, patterns of residence were so closely interwoven with other influences that it is impossible to isolate migration status as an important factor. This is most pertinent in the Scunthorpe district, where both the sources and the residences of particular migrant groups were intricately related to the nature of employment. For example, migrants from Essex probably showed the highest degree of residential clustering in the district. 12 of the 14 heads were living in New Frodingham and at least 7 of these lived next door to another. Yet it appears that most of these people moved in to fill specific job openings in the iron industry, and that these houses probably went with the job (see Chapter 6).

This was not necessarily the same as arriving in a strange new town and seeking out co-villagers for security and reassurance.

3. Patterns of co-residence

Tables 9.6 (a)-(h) present information on patterns of co-residence in the two study locations, together with comparable material for urban areas from the National Sample of the 1851 census.³⁶ In some respects, the Lincolnshire material possesses similar patterns to those found in the 1851 urban sample. Thus natives were far more likely to be living in their parents' household than were migrants, and no clear pattern is evident in the propensity to live in households headed by other kin. Turning to those who were servants or some other co-resident employee, differences do emerge. In Grantham and the Scunthorpe district, among both males and females aged 15-19 and among females aged 20-24, locally-born migrants are much more likely to appear in this class than either natives or longer-distance migrants. Such a phenomenon seems absent in the 1851 data, although the residual category is large enough in many cases to render those results equivocal. The tendency for domestic servants to be recruited from local villages rather than among the native population has already been noted in the case of Grantham.³⁷ Many of the male servants in the Scunthorpe district were farm hands – again recruited locally.

Perhaps the most important finding of Tables 9.6 (a)-(h), however, concerns lodging. The 1851 sample shows that the Irish were very much more likely to live in lodgings than were other migrants, and that this applied across all age groups.³⁸ Nevertheless, a distinct pattern emerges among the other groups, even if such differences appear small in the context of the extreme behaviour

TABLE 9.6 (a) RELATIONSHIP TO HEAD OF HOUSEHOLD BY MIGRATION STATUS, MALES AGED 15-19, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881, AND SAMPLE OF BRITISH TOWNS, 1851 (%)

	<u>MIGRATION STATUS</u>			
	<u>Non-migrant</u>	<u>1-49 km</u>	<u>>= 50 km</u>	<u>Ireland</u>
<u>Grantham</u>				
Head	1.7	---	-	-
Child	83.9	50.0	60.9	-
Kin	8.5	9.0	6.5	-
Lodger	2.5	12.8	17.4	-
Servants etc.	3.4	28.2	15.2	-
(N = 100%)	(118)	(78)	(46)	-
<u>Scunthorpe district</u>				
Head	-	1.1	-	-
Child	85.3	57.4	68.4	-
Kin	2.9	5.3	7.9	-
Lodger	-	5.3	10.5	-
Servants etc.	11.8	30.9	13.2	-
(N = 100%)	(34)	(94)	(38)	-
<u>Urban sample, 1851</u>				
Head	0.7	1.4	1.7	4.0
Child	83.4	55.3	47.5	60.0
Kin	4.8	7.8	11.9	10.0
Lodger	5.9	12.8	20.3	26.0
Servants etc.	5.2	22.7	18.6	-
(N = 100%)	(289)	(141)	(59)	(50)

Source: C.E.Bs.; National Sample of the 1851 census.

- Notes: 1) A migrant is defined here as someone born outside the study area.
- 2) 'Servants etc' includes servants and apprentices in the 1851 urban sample, plus all other co-resident employees in the case of the two study locations.
- 3) County centroids were used for all birthplace distances in the 1851 urban sample, and for those Grantham and Scunthorpe district cases for whom only the county of birth is known.

TABLE 9.6 (b) RELATIONSHIP TO HEAD OF HOUSEHOLD BY MIGRATION STATUS, MALES AGED 20-24, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881, AND SAMPLE OF BRITISH TOWNS, 1851 (%)

	<u>MIGRATION STATUS</u>			
	<u>Non-migrant</u>	<u>1-49 km</u>	<u>>= 50 km</u>	<u>Ireland</u>
<u>Grantham</u>				
Head	20.8	22.5	11.4	-
Child	63.6	30.0	25.0	-
Kin	9.1	6.2	2.3	-
Lodger	6.5	32.5	47.7	-
Servants etc.	-	8.7	13.6	-
(N = 100%)	(77)	(80)	(44)	-
<u>Scunthorpe district</u>				
Head	17.9	35.2	27.3	-
Child	64.3	17.6	13.0	-
Kin	-	9.1	9.1	-
Lodger	10.7	33.3	49.4	-
Servants etc.	7.1	4.8	1.3	-
(N = 100%)	(28)	(165)	(77)	-
<u>Urban sample, 1851</u>				
Head	20.6	19.1	26.3	12.5
Child	55.0	30.5	17.1	26.8
Kin	8.3	9.2	13.2	5.3
Lodger	12.4	22.9	32.9	53.6
Servants etc.	3.7	18.3	10.5	1.8
(N = 100%)	(218)	(131)	(76)	(56)

Source: C.E.Bs.; National Sample of the 1851 census.

- Notes: 1) A migrant is defined here as someone born outside the study area.
- 2) 'Servants etc' includes servants and apprentices in the 1851 urban sample, plus all other co-resident employees in the case of Grantham and the Scunthorpe district townships.
- 3) County centroids were used for all birthplace distances in the 1851 urban sample, and for those Grantham and Scunthorpe district cases where only county of birth is known.

TABLE 9.6 (c) RELATIONSHIP TO HEAD OF HOUSEHOLD BY MIGRATION STATUS, MALES AGED 25-34, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881, AND SAMPLE OF BRITISH TOWNS, 1851 (%)

	<u>MIGRATION STATUS</u>			
	<u>Non-migrant</u>	<u>1-49 km</u>	<u>>=50 km</u>	<u>Ireland</u>
<u>Grantham</u>				
Head	61.7	75.2	74.2	-
Child	31.9	5.5	5.4	-
Kin	5.3	5.5	1.1	-
Lodger	1.1	13.3	16.1	-
Servants etc	-	0.6	3.2	-
(N = 100%)	(94)	(165)	(93)	-
<u>Scunthorpe district</u>				
Head	73.6	75.5	67.1	-
Child	15.1	5.8	1.9	-
Kin	3.8	3.2	4.3	-
Lodger	7.5	15.5	26.1	-
Servants etc.	-	-	0.6	-
(N = 100%)	(53)	(278)	(161)	-
<u>Urban sample, 1851</u>				
Head	60.2	71.3	65.4	50.0
Child	23.4	10.5	6.8	6.1
Kin	5.2	4.6	4.3	8.5
Lodger	9.3	11.0	20.4	35.4
Servants etc.	1.9	2.5	3.1	-
(N = 100%)	(269)	(237)	(162)	(82)

Source: C.E.Bs.; National Sample of the 1851 census.

- Notes:
- 1) A migrant is defined here as someone born outside the study area.
 - 2) 'Servants etc' includes servants and apprentices in the 1851 urban sample, plus all other co-resident employees in the case of Grantham and the Scunthorpe district townships.
 - 3) County centroids were used for all birthplace distances in the 1851 urban sample, and for those Grantham and Scunthorpe district cases where only county of birth is known.

TABLE 9.6 (d) RELATIONSHIP TO HEAD OF HOUSEHOLD BY MIGRATION STATUS, MALES AGED 35-44, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881, AND SAMPLE OF BRITISH TOWNS, 1851 (%)

	<u>MIGRATION STATUS</u>			
	<u>Non-migrant</u>	<u>1-49 km</u>	<u>>=50 km</u>	<u>Ireland</u>
<u>Grantham</u>				
Head	86.3	86.0	84.6	-
Child	9.6	5.0	-	-
Kin	1.4	3.3	-	-
Lodger	2.7	5.0	14.1	-
Servants etc	-	0.8	1.3	-
(N = 100%)	(73)	(121)	(78)	-
<u>Scunthorpe district</u>				
Head	90.2	84.5	80.6	-
Child	2.4	1.7	-	-
Kin	-	2.3	1.0	-
Lodger	7.3	10.9	18.4	-
Servants etc.	-	0.6	-	-
(N = 100%)	(41)	(174)	(103)	-
<u>Urban sample, 1851</u>				
Head	82.3	79.8	85.2	69.7
Child	8.1	4.4	2.1	-
Kin	2.7	3.9	0.7	4.5
Lodger	5.9	11.3	12.0	25.8
Servants etc.	1.1	0.5	-	-
(N = 100%)	(186)	(203)	(142)	(66)

Source: C.E.Bs.; National Sample of the 1851 census.

- Notes:
- 1) A migrant is defined here as someone born outside the study area.
 - 2) 'Servants etc' includes servants and apprentices in the 1851 urban sample, plus all other co-resident employees in the case of Grantham and the Scunthorpe district townships.
 - 3) County centroids were used for all birthplace distances in the 1851 urban sample, and for those Grantham and Scunthorpe district cases where only county of birth is known.

TABLE 9.6 (e)

RELATIONSHIP TO HEAD OF HOUSEHOLD BY MIGRATION STATUS, MALES AGED 45 AND ABOVE, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881, AND SAMPLE OF BRITISH TOWNS, 1851(%)

	<u>MIGRATION STATUS</u>			
	<u>Non-migrant</u>	<u>1-49 km</u>	<u>>= 50 km</u>	<u>Ireland</u>
<u>Grantham</u>				
Head	79.0	87.3	86.2	-
Child	1.0	0.4	-	-
Kin	10.0	3.8	3.7	-
Lodger	10.0	8.4	10.1	-
Servants etc	-	-	-	-
(N = 100%)	(100)	(238)	(109)	-
<u>Scunthorpe district</u>				
Head	87.5	84.3	72.5	-
Child	1.8	0.5	-	-
Kin	3.6	5.1	6.3	-
Lodger	7.1	9.1	20.0	-
Servants etc	-	1.0	1.3	-
(N = 100%)	(56)	(197)	(80)	-
<u>Urban sample, 1851</u>				
Head	88.3	87.5	82.1	78.1
Child	0.4	0.6	1.1	1.4
Kin	2.1	4.6	4.9	4.1
Lodger	8.4	6.4	9.8	16.4
Servants etc	0.8	0.9	2.2	-
(N = 100%)	(239)	(329)	(184)	(73)

Source: C.E.Bs.; National Sample of the 1851 census.

- Notes:
- 1) A migrant is defined here as someone born outside the study area.
 - 2) 'Servants etc' includes servants and apprentices in the 1851 urban sample, plus all other co-resident employees in the case of Grantham and the Scunthorpe district townships.
 - 3) County centroids were used for all birthplace distances in the 1851 urban sample, and for those Grantham and Scunthorpe district cases where only county of birth is known.

TABLE 9.6 (f)

RELATIONSHIP TO HEAD OF HOUSEHOLD BY MIGRATION STATUS, FEMALES AGED 15-19, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881, AND SAMPLE OF BRITISH TOWNS, 1851 (%)

	<u>MIGRATION STATUS</u>			
	<u>Non-migrant</u>	<u>1-49 km</u>	<u>>= 50 km</u>	<u>Ireland</u>
<u>Grantham</u>				
Head or wife	2.3	2.0	3.3	-
Child	68.7	23.5	33.3	-
Kin	8.6	4.1	15.0	-
Lodger	3.1	7.1	28.3	-
Servants etc	17.1	63.3	20.0	-
(N = 100%)	(128)	(98)	(60)	-
<u>Scunthorpe district</u>				
Head or wife	11.1	5.9	15.2	-
Child	66.7	51.8	54.5	-
Kin	7.4	5.9	9.1	-
Lodger	-	2.4	3.0	-
Servants etc	14.8	34.1	18.2	-
(N = 100%)	(27)	(85)	(33)	-
<u>Urban sample, 1851</u>				
Head or wife	2.3	3.8	4.0	4.0
Child	71.8	45.5	36.0	52.0
Kin	7.6	10.3	6.7	8.0
Lodger	4.3	10.9	17.3	24.0
Servant	14.0	29.5	36.0	12.0
(N = 100%)	(301)	(156)	(75)	(50)

Source: C.E.Bs.; National Sample of the 1851 census.

- Notes:
- 1) A migrant is defined here as someone born outside the study area.
 - 2) 'Servants etc' includes servants and apprentices plus all other co-resident employees in the case of Grantham and the Scunthorpe district townships.
 - 3) County centroids were used for all birthplace distances in the 1851 urban sample, and for those Grantham and Scunthorpe district cases where only county of birth is known.

TABLE 9.6 (g)

RELATIONSHIP TO HEAD OF HOUSEHOLD BY MIGRATION STATUS, FEMALES AGED 20-24, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881, AND SAMPLE OF BRITISH TOWNS, 1851 (%)

	<u>MIGRATION STATUS</u>			
	<u>Non-migrant</u>	<u>1-49 km</u>	<u>>= 50 km</u>	<u>Ireland</u>
<u>Grantham</u>				
Head or wife	27.0	33.3	28.3	-
Child	51.7	16.3	28.3	-
Kin	6.7	8.9	4.3	-
Lodger	3.4	3.3	13.0	-
Servants etc	11.2	38.2	26.1	-
(N = 100%)	(89)	(123)	(46)	-
<u>Scunthorpe district</u>				
Head of wife	33.3	59.6	60.4	-
Child	46.7	9.6	12.5	-
Kin	6.7	6.6	4.2	-
Lodger	-	8.1	18.8	-
Servants etc	13.3	16.2	4.2	-
(N = 100%)	(30)	(136)	(48)	-
<u>Urban sample, 1851</u>				
Head or wife	27.0	29.3	30.7	22.4
Child	50.9	27.5	16.0	25.9
Kin	9.3	12.0	6.7	13.8
Lodger	5.7	8.4	9.3	27.6
Servants etc	7.1	22.8	37.3	10.3
(N = 100%)	(226)	(167)	(75)	(58)

Source: C.E.Bs.; National Sample of the 1851 census.

- Notes:
- 1) A migrant is defined here as someone born outside the study area.
 - 2) 'Servants etc' includes servants and apprentices in the 1851 urban sample, plus all other co-resident employees in the case of Grantham and the Scunthorpe district townships.
 - 3) County centroids were used for all birthplace distances in the 1851 urban sample, and for those Grantham and Scunthorpe district cases where only county of birth is known.

TABLE 9.6 (h) RELATIONSHIP TO HEAD OF HOUSEHOLD BY MIGRATION STATUS, FEMALES AGED 25-34, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881, AND SAMPLE OF BRITISH TOWNS, 1851 (%)

	<u>MIGRATION STATUS</u>			
	<u>Non-migrant</u>	<u>1-49 km</u>	<u>>= 50 km</u>	<u>Ireland</u>
<u>Grantham</u>				
Head or wife	57.6	71.2	72.6	-
Child	32.6	12.5	7.4	-
Kin	6.5	4.9	5.3	-
Lodger	2.2	1.6	2.1	-
Servants etc	1.1	9.8	12.6	-
(N = 100%)	(92)	(184)	(95)	-
<u>Scunthorpe district</u>				
Head or wife	76.3	91.1	88.5	-
Child	18.4	1.3	3.5	-
Kin	5.3	0.9	-	-
Lodger	-	3.0	5.3	-
Servants etc	-	3.8	2.7	-
(N = 100%)	(38)	(235)	(113)	-
<u>Urban sample, 1851</u>				
Head or wife	64.2	67.3	68.7	56.0
Child	24.3	10.6	9.2	10.0
Kin	4.4	6.2	4.9	6.0
Lodger	4.7	5.0	6.7	25.0
Servants etc.	2.4	10.9	10.4	3.0
(N = 100%)	(296)	(321)	(163)	(100)

Source: C.E.Bs.; National Sample of the 1851 census.

- Notes: 1) A migrant is defined here as someone born outside the study area.
- 2) 'Servants etc' includes servants and apprentices in the 1851 urban sample, plus all other co-resident employees in the case of Grantham and the Scunthorpe district townships.
- 3) County centroids were used for all birthplace distances in the 1851 urban sample, and for those Grantham and Scunthorpe district cases where only county of birth is known.

TABLE 9.7 CHI-SQUARE TESTS OF SIGNIFICANCE BETWEEN PROPORTION OF DIFFERENT BIRTHPLACE GROUPS LIVING IN LODGINGS, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

<u>Difference between birthplace groups</u>					
		<u>Non-migrant/1-49 km</u>		<u>1-49 km/ >= 50 km</u>	
		chi ²	Significance	chi ²	Significance
<u>Grantham</u>					
Males	15 - 19	8.02	p<0.01	0.49	NS
Males	20 - 24	16.73	p<0.001	2.79	p<0.10
Males	25 - 34	11.15	p<0.001	0.38	NS
Males	35 - 44	0.14*	NS	5.08	p<0.05
Males	>= 45	0.22	NS	0.27	NS
Females	15 - 19	1.93	p<0.20	12.99	p<0.001
Females	20 - 24	0.00	NS	4.15*	p<0.05
Females	25 - 34	0.03*	NS	0.04*	NS
<u>Scunthorpe district</u>					
Males	15 - 19	0.73*	NS	1.16	NS
Males	20 - 24	5.82	p<0.02	5.69	p<0.02
Males	25 - 34	2.30	p<0.20	7.37	p<0.01
Males	35 - 44	0.16	NS	3.10	p<0.10
Males	>= 45	0.22	NS	6.23	p<0.02
Females	15 - 19	0.00*	NS	0.04*	NS
Females	20 - 24	1.46*	NS	4.16	p<0.05
Females	25 - 34	0.28*	NS	0.60*	NS
<u>Pooled significance</u>					
Grantham Males		36.26	p<0.001	9.01	p<0.20
Grantham Females		1.96	NS	17.18	p<0.001
Scunthorpe Males		9.23	p<0.20	23.55	p<0.001
Scunthorpe Females		1.74	NS	4.80	p<0.20

Source: Tables 9.6 (a) - (h)

- Notes:
- 1) All tests have 1 degree of freedom, except pooled males (5 degrees of freedom) and pooled females (3 degrees of freedom).
 - 2) The 'pooled' significance is the overall significance of the differences, controlling for age.
 - 3) Corrections for continuity due to expected values of 5 or less are asterixed.

of the Irish. In nearly all male age groups across all three data sets, lodging was more common among migrants than among natives, and among longer-distance movers than among those from more local sources (and see Table 9.7). Indeed, this seems to be more pronounced in my two study locations than within the 1851 data. A similar pattern is found among females, but is generally less marked and is restricted to certain age groups. A further point of note in the Scunthorpe district material is the high degree of lodging among males at later stages of the life-cycle. One in five of those men aged 45 and older who were born 50 kilometres away or more were living in lodgings, compared with just one in ten of their Grantham counterparts. In this respect, some of the migrants to the Scunthorpe district were not dissimilar from Irish migrants earlier in the century, who tended to lodge at much later ages than the non-Irish.³⁹ Two factors seem to be at work here: first, accommodation was in shorter supply in the Scunthorpe district than it was in Grantham; second, the older migrants in the former district had probably arrived more recently than those in the latter.

It is possible, of course, that this relationship between lodging and migration distance is an artefact. For example, the patterns found may really be a function of occupation. In Chapter 6 and 7 it was shown that certain occupational groups tended to originate in longer-distance locations more than others, and Table 9.8 shows that certain groups were also disproportionately represented among the lodging population. Table 9.9, however, suggests the relationship holds good even when occupation is controlled for. While some cells contain perilously few cases, and few pairs of differences are statistically significant, in almost every occupational group lodging increases with distance migrated.⁴⁰ Similarly, it could be argued that the longer-distance migrant stream may have contained proportionately more unmarried men or unaccompanied married men than did that from closer

TABLE 9.8 **PERCENTAGE OF ALL MALES IN LODGINGS, SELECTED
OCCUPATIONAL GROUPS, GRANTHAM SAMPLE AND FOUR
SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881**

	%	(N)
<u>Grantham</u>		
Managerial/Clerical/White collar engineering	18.2	{ 22 }
Skilled engineering	8.1	{ 173 }
Unskilled/Semi-skilled engineering	9.0	{ 89 }
Agriculture	9.0	{ 89 }
Trade and Commerce	6.6	{ 304 }
Craft	10.7	{ 253 }
Railway	17.1	{ 76 }
 <u>Scunthorpe district</u>		
Managerial/Clerical iron	13.6	{ 22 }
'Higher' iron workers	19.8	{ 162 }
'Lower' iron workers	26.3	{ 266 }
Iron miners	16.2	{ 383 }
Agriculture	5.8	{ 206 }
Trade	2.6	{ 115 }
Craft	19.5	{ 41 }

Source: C.E.Bs.

Notes: For the allocation of specific job titles to occupational groups see Chapters 5 and 7.

TABLE 9.9 **PERCENTAGE OF MALES IN LODGINGS BY MIGRATION STATUS,
SELECTED OCCUPATIONAL GROUPS, GRANTHAM SAMPLE AND
FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881**

	<u>BIRTHPLACE</u>					
	<u>Non-Migrant</u>		<u>1-49 km</u>		<u>>= 50 km</u>	
	%	(N)	%	(N)	%	(N)
<u>Grantham</u>						
Skilled engineering	- ^a	(67)	7.9 ^b	(63)	20.5 ^c	(39)
Un/Semi-skilled engineering	6.5	(31)	13.2	(38)	-	(17)
Labourer (unspecified)	11.0 ^a	(73)	15.2	(112)	18.5	(27)
Craft, possibly in engineering	6.5 ^a	(46)	14.5 ^e	(62)	29.4	(17)
Agriculture	-	(15)	10.6 ^f	(47)	15.4 ^g	(13)
Trade and commerce	4.4 ^h	(91)	5.6 ^f	(126)	12.7 ^g	(71)
Craft	1.0 ^h	(96)	13.6 ⁱ	(88)	21.7 ^k	(60)
Railway	-	(7)	5.3 ^j	(38)	10.0 ^k	(30)
<u>Scunthorpe district</u>						
'Higher' iron workers	16.7	(12)	16.3	(86)	23.8	(63)
'Lower' iron workers	11.8 ^l	(17)	25.0 ^m	(132)	29.2	(113)
Iron miners	6.7 ^l	(45)	16.5 ^m	(261)	20.0	(70)
Craft, trade and others possibly in iron	3.7	(27)	5.7 ⁿ	(53)	31.3 ^o	(32)
Labourers (unspecified)	16.7	(6)	24.4 ^p	(82)	41.4 ^q	(58)
Agriculture	6.0	(50)	5.3	(132)	11.1	(18)
Trade	-	(21)	3.3	(61)	3.7	(27)

Source: C.E.Bs.

(continued on next page)

TABLE 9.9 continued

Notes: The following pairs of differences are statistically significant:

a/b :	χ^2_2	=	3.60,	$p < 0.10$	(corrected for continuity)
b/c :	χ^2_2	=	2.39,	$p < 0.20$	(corrected for continuity)
d/e :	χ^2_2	=	1.71,	$p < 0.20$	
f/g :	χ^2_2	=	3.08,	$p < 0.10$	
h/i :	χ^2_2	=	11.08,	$p < 0.001$	
j/k :	χ^2_2	=	2.15,	$p < 0.20$	
l/m :	χ^2_2	=	2.89,	$p < 0.10$	
n/o :	χ^2_2	=	8.22,	$p < 0.01$	(corrected for continuity)
p/q :	χ^2_2	=	4.55,	$p < 0.05$	

All with 1 degree of freedom.

No other pairs of differences were significant.

Tests of pooled significance where occupation is controlled for give the following results:

Grantham

Non-migrants/1-49km: $\chi^2 = 18.78$, $p < 0.02$

1-49km./ 50km: $\chi^2 = 11.54$, $p < 0.20$

Both with 8 degrees of freedom.

Scunthorpe district

Non-migrants/1-49 km: $\chi^2 = 3.77$, not significant

1-49km./ 50km: $\chi^2 = 15.33$, $p < 0.05$.

Both with 7 degrees of freedom.

TABLE 9.10

RELATIONSHIP TO HEAD OF HOUSEHOLD OF UNMARRIED MALES
BY MIGRATION STATUS, GRANTHAM SAMPLE AND FOUR
SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881 (%)

	<u>Migration Status</u>		
	<u>Non-migrant</u>	<u>1-49km</u>	<u>>= 50km</u>
<u>Grantham</u>			
Head	1.1	3.1	1.6
Child	90.0	59.4	59.2
Kin	6.1	10.3 _b	8.6
Lodger	2.3 ^a	18.6 ^b	23.5 ^c
Servants etc	0.5	8.6	7.1
	(N=853)	(N=360)	(N=255)
<u>Scunthorpe district</u>			
Head	0.3	1.9	1.9
Child	93.8	65.9	62.0
Kin	2.9 _d	6.3	4.9 _f
Lodger	2.0 ^d	18.5 ^e	28.9 ^f
Servants etc	1.1	7.4	2.3
	(N=758)	(N=583)	(N=308)

Source: C.E.Bs.

- Notes: 1) A migrant is defined here as someone born outside the study area.
- 2) 'Servants etc' includes servants, apprentices and other co-resident employees.
- 3) County centroids were used in those cases for whom only the county of birth was known.
- 4) The following pairs of differences are statistically significant:
- a/b : $\chi^2_1 = 100.61$, 1 degree of freedom, $p < 0.001$
- b/c : $\chi^2_1 = 2.57$, 1 degree of freedom, $p < 0.20$
- d/e : $\chi^2_1 = 86.70$, 1 degree of freedom, $p < 0.001$
- e/f : $\chi^2_1 = 23.68$, 1 degree of freedom, $p < 0.001$

locations. Table 9.10, however, suggests the relationship persists even when analysis is restricted to unmarried males. Lastly, the timing of movement might have played a part. Those from afar may have moved more recently than local movers, and hence be more likely to be found in temporary lodging accommodation. Unfortunately, no direct evidence is available on this point. The only means of estimating the year of arrival is through the ages and birthplaces of co-resident children, and the overwhelming majority of lodgers had no offspring living with them. All that can be done is to cite the example of all migrant fathers whose children do enable an arrival date to be estimated, although scarcely any such men were in lodgings. The method used is explained in Chapter 5. Among fathers who had arrived in the Scunthorpe district at some time in the 1870s, 35.0% of those born within 50 kilometres had arrived in 1877 or later (N=100). Of those born further afield, 31.7% had done so (N=60). The corresponding figures for Grantham are 46.7% and 44.8% (N=45 and 29 respectively). A similar picture emerges when other years are used instead of 1877. At the general level, then, there is no evidence to suggest that migrants from longer distances arrived more recently than the more locally-born.

It would seem, then, that in both locations those from longer distances possessed a greater propensity to live in lodgings than those who originated closer by, who in turn were more likely to lodge than were non-migrants. What meaning can be attached to these findings? At first glance, they would appear to confirm a crude interpretation cast in terms of the 'assimilation' of migrants to urban-industrial life. On further reflection, however, this is clearly not the case. For one thing, it is unclear why those migrants from longer distances should have 'suffered' that much more than other newcomers. More importantly, there is no a priori reason to equate lodging with social or material disadvantage. Anderson has written that

'It is easy to assume that living in lodgings was an inferior status and that we have here clear evidence of material disadvantage. This is not necessarily the case. Most of these lodgers, and especially most of the British-born lodgers, did not live in large and uncomfortable lodging houses. Most lived with ordinary families as the sole lodger (or less often as one of two or three supplementary members) taken in almost as part of the family to supplement family incomes. Some were probably distant relatives; many more were workmates. The greater freedom (and sometimes the greater amount of physical space) experienced by lodgers was sometimes seen by them as something to be prized rather than to be deplored'.⁴¹

Furthermore, if lodging really was a stage in the 'assimilation' process, we might expect those from rural backgrounds to have been the most affected. Table 9.11 shows that this was not the case. In Grantham, the truly 'urban' location, such a relationship only existed among those males from very long distances; the opposite or no relationship is found among other migrant groups. A consistent pattern can be seen among the Scunthorpe district males, but in the opposite direction: people from urban backgrounds were the most likely to live in lodgings.⁴² As lodging was mainly an urban phenomenon⁴³, it seems that those most prone to resort to lodgings were those most familiar with lodging as an institution.

Rather than being a means of 'assimilation' to an urban-industrial way of life, lodging can be more usefully seen simply as a mechanism by which the volume of in-migration was matched to the supply of suitable accommodation. It seems clear that lodging was a temporary phenomenon, a stage which some migrants passed through in the period after their arrival before heading their own household.⁴⁴ From this perspective, we would expect it to be particularly important in rapidly expanding industrial communities. Indeed, there were 0.36 lodgers per private household in the Scunthorpe district in 1881, compared with 0.24 in Grantham (and see Tables 9.6 (a)-(h)). The high degree of lodging among older males in the Scunthorpe district has already been noted. Moreover, the lodging of whole families was

TABLE 9.11 **PERCENTAGE OF THE MIGRANT POPULATION (BOTH SEXES)**
LIVING IN LODGINGS, BY BIRTHPLACE DISTANCE AND
BIRTHPLACE TYPE, GRANTHAM SAMPLE AND FOUR
SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

<u>Birthplace distance</u>	<u>Birthplace type</u>			
	<u>Grantham</u>		<u>Scunthorpe district</u>	
	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1 - 49 km	8.0 (N=362)	6.9 (N=1168)	10.8 (N=240)	8.1 (N=1615)
50 - 99 km	22.4 (N=134)	7.9 (N=217)	20.4 (N=108)	12.3 (N=162)
>= 100 km	13.0 (N=208)	18.4 (N=103)	19.3 (N=202)	10.0 (N=250)

Source: C.E.Bs.

- Notes: 1) A migrant is defined here as someone born outside the study area.
- 2) Definitions of 'rural' and 'urban' birthplaces are explained in Chapter 6, note 40.

also more common there: 15.0% of male lodgers (excluding children) in private households in the Scunthorpe district were living with their wives and/or children (N =267); the figure for Grantham was 7.4% (N =163). Partly as a result of this, multiple lodging was more common in the Scunthorpe district than in Grantham, the proportion of private households containing lodgers with more than one lodger being 44.0% and 31.1% respectively.⁴⁵ If wives and children are excluded, 52.1% of lodgers in the Scunthorpe district were living in private households containing at least one other lodger besides their own wife or child, where present; 42.9% of Grantham's lodgers were so enumerated⁴⁶

Another measure of the pressure on accommodation is the extent to which dwellings were shared between separate households. This can be seen, perhaps, as another form of lodging: the distinction between the two patterns of residence is certainly blurred. Table 9.12 presents the available data from the two case studies. Because census enumerators did not always indicate shared houses, the second part of the table excludes those enumeration districts which had no such premises.⁴⁷ The pattern shown is strikingly similar to that found for lodgers. Migrants from afar were most victim to the pressure on accommodation, especially in the Scunthorpe district.

Who was taking in all the lodgers? Nearly all the lodgers in the Scunthorpe district were living in private households with the remainder living in common lodging houses. In the Grantham sample, excluding 40 boarding school pupils and all those in hotels and inns, 94.9% of lodgers were in private households and the remaining 5.1% in common lodging houses.⁴⁸ Table 9.13 confirms our earlier observation concerning the use of lodging to denote the extent of integration in urban life. Just as there is little evidence to suggest the rural-born were to be found in lodgings more than the urban-born, so there is no clear difference between rural- and urban-born household heads'

TABLE 9.12 **PERCENTAGE OF HOUSEHOLD HEADS (BOTH SEXES) IN SHARED DWELLING HOUSES, BY BIRTHPLACE STATUS, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881**

	<u>Birthplace</u>			
	<u>Non-migrant</u>	<u>1-49 km</u>	<u>50-99 km</u>	<u>≥ 100 km</u>
(a) <u>ALL CASES</u>				
<u>Grantham</u>				
Kin co-head	-	0.2	-	-
Non-kin co-head	2.7	3.2	1.7	7.2
	(N=259)	(N=527)	(N=118)	(N=125)
<u>Scunthorpe district</u>				
Kin co-head	0.7	0.5	-	-
Non-kin co-head	0.7	2.1	2.4	7.2
	(N=138)	(N=612)	(N=85)	(N=195)
(b) <u>ENUMERATION DISTRICTS CONTAINING SOME SHARED DWELLINGS ONLY</u>				
<u>Grantham</u>				
Kin co-head	-	0.3	-	-
Non-kin co-head	4.2	4.8	2.9	9.5
	(N=167)	(N=352)	(N=69)	(N=95)
<u>Scunthorpe township</u>				
Kin co-head	2.8	1.2	-	-
Non-kin co-head	2.8	5.3	5.6	17.7
	(N=36)	(N=246)	(N=36)	(N=79)

Source: C.E.Bs.

- Notes:
- 1) A migrant is defined here as someone born outside the study area, even in the case of Scunthorpe township alone.
 - 2) County centroids are used to categorise those migrants for whom only the county of birth is known.
 - 3) Co-heads are classed as kin where they share the same surname.

TABLE 9.13 PERCENTAGE OF PRIVATE HOUSEHOLDS CONTAINING LODGERS,
BY BIRTHPLACE DISTANCE AND BIRTHPLACE TYPE OF
HOUSEHOLD HEAD, GRANTHAM SAMPLE AND FOUR SCUNTHORPE
DISTRICT STUDY TOWNSHIPS, 1881

<u>BIRTHPLACE DISTANCE</u>	<u>BIRTHPLACE TYPE</u>			
	<u>Grantham Sample</u>		<u>Scunthorpe district</u>	
	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>1 - 49 km</u>	13.8 (N=123)	16.4 (N=373)	25.8 (N=62)	20.7 (N=527)
<u>50 - 99 km</u>	15.4 (N=39)	15.8 (N=76)	16.0 (N=25)	32.1 (N=56)
<u>≥ 100 km</u>	7.3 (N=55)	13.0 (N=23)	17.6 (N=51)	13.6 (N=81)

Source: C.E.Bs.

- Notes:
- 1) A migrant is defined here as someone born outside the study district.
 - 2) County centroids were used to classify those cases for whom only the county of birth is known..

TABLE 9.14 PERCENTAGE OF PRIVATE HOUSEHOLDS CONTAINING
LODGERS, BY BIRTHPLACE DISTANCE OF HOUSEHOLD HEAD,
GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY
TOWNSHIPS, 1881

	<u>Birthplace distance</u>		
	<u>Non-migrant</u>	<u>1 - 49 km</u>	<u>>= 50 km</u>
Grantham	17.4 (N=259)	16.3 ^a (N=527)	11.5 ^b (N=243)
Scunthorpe district	15.9 ^c (N=138)	21.2 ^d (N=612)	21.1 (N=280)

Source: C.E.Bs.

- Notes: 1) A migrant is defined here as someone born outside the study area.
- 2) County centroids were used to classify those cases for whom only the county of birth is known.
- 3) The following pairs of differences are statistically significant.

a/b : $\chi^2 = 3.04$, 1 degree of freedom, $p < 0.10$

c/d: $\chi^2 = 1.96$, 1 degree of freedom, $p < 0.20$

propensity to take in lodgers. Table 9.14 breaks down the information on lodging households by the birthplace distance of the household head. Again, no clear picture emerges. There is a slight suggestion that Grantham-born heads and local migrants were more likely to take in lodgers than those from longer distances, while in the Scunthorpe district natives were the least prone to do so, but the differences are small and few are significant except at a very low level.

More interesting patterns emerge when we look at the relationship between individual lodgers and other members of their households.

Other work has pointed to the tendency for migrants to lodge in the households of fellow-migrants from the same area. For example, in Merthyr Tydfil in 1851 57.1% of lodgers from south-west Wales lived in households whose head came from the same region; the equivalent figure for the Irish was a massive 87%.⁴⁹ As Maude found for mid-nineteenth century Nottingham, the figures appear much less impressive when the analysis is restricted to those lodging with co-villagers. Yet although most migrant lodgers did not live with co-villagers, the proportion who did so was markedly higher than would have occurred by chance. In Preston in 1851, 20% of all migrant lodgers aged 15 and above (excluding the Irish) were born in the same community as their household head or a member of the head's extended family, whereas no more than 2% would have done so on a random basis.⁵⁰ Data from my two case studies are comparable. Excluding wives and children, 5.0% of migrant lodgers in the Grantham sample were born within 2 kilometres and 16.5% within 10 kilometres of their household head.⁵¹ The equivalent figures in the Scunthorpe district were 6.9% and 20.8%.⁵² The analysis can be extended to all other household members including co-lodgers but excluding visitors and the lodger's own wife and/or children (if any). The figures rise to 17.9% and 31.8% respectively in Grantham, and

19.8% and 39.2% in the Scunthorpe district.⁵³ Many migrants were clearly making positive efforts to live with people from the same locality. Some had doubtless moved in with these other household members, while others took up residence with contacts who had arrived earlier.

We might expect this behaviour to have been especially marked among migrants from farther afield. Such people would be less familiar with their eventual destination than more local movers. They would therefore be more likely to have followed earlier pioneers as part of a migration chain, or to move with friends or kin. The opposite seems to have been the case. Table 9.15 presents the same figures broken down by the life-time migration distance of the lodger concerned. It appears that the opportunities of moving into a household containing familiar people were very restricted indeed for those from longer distances.

It could be argued that here we have a clear indication that those from longer distances coped less favourably than local movers with their new surroundings, or even, to the contrary, that long-distance migrants were more successful in finding accommodation and had less need to lodge with co-villagers. In fact, the patterns shown in the Tables have a predominantly mathematical explication: the number and spatial range of potential sending communities grows as the distance from any destination increases. Local communities are very much nearer to one another than those further away.⁵⁴ Thus among longer-distance migrant lodgers, those in the Scunthorpe district had a greater propensity to live with others born within 10 kilometres of themselves than did their Grantham counterparts, reflecting the greater reliance in the former location on the concentrated recruitment of labour from specific areas of the country.

In sum, there was a tendency for migrants to lodge with people from the

TABLE 9.15 PERCENTAGE OF INDEPENDENT MIGRANT LODGERS IN PRIVATE HOUSEHOLDS BORN WITHIN 2 KILOMETRES AND 10 KILOMETRES OF AT LEAST ONE OTHER HOUSEHOLD MEMBER, BY BIRTHPLACE DISTANCE, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

	<u>Lodger's birthplace</u>	
	<u>1 - 49 km</u>	<u>>= 50 km</u>
<u>Born within 2 kilometres of another household member</u>		
Grantham	23.3 ^a (N=90)	9.8 ^b (N=61)
Scunthorpe district	23.9 ^c (N=134)	11.4 ^d (N=88)
<u>Born within 10 kilometres of another household member</u>		
Grantham	44.4 ^e (N=90)	13.1 ^f (N=61)
Scunthorpe district	45.5 ^g (N=134)	23.9 ^h (N=88)

Source: C.E.Bs.

- Notes:
- 1) 'Independent' lodgers excludes those lodgers who are the wife or child of another lodger.
 - 2) 'Other household members' includes non-migrants and other lodgers, but excludes lodging wives and children and all visitors.
 - 3) A migrant lodger is defined here as one born outside the study district.
 - 4) Those lodgers without an identifiable community of birth are excluded from the analysis. County centroids are not used in this Table.
 - 5) The following pairs of differences are statistically significant.

$$\begin{aligned}
 a/b : \chi^2_2 &= 4.52, p < 0.05 \\
 c/d : \chi^2_2 &= 5.43, p < 0.02 \\
 e/f : \chi^2_2 &= 16.46, p < 0.001 \\
 g/h : \chi^2_2 &= 10.69, p < 0.01 \\
 f/h : \chi^2_2 &= 2.65, p < 0.20
 \end{aligned}$$

with one degree of freedom in each case.

same sending area but, in contrast to the evidence on propinquity, those from afar were less prone to this behaviour than were more local movers. Assuming that such co-residence was to be preferred, at least until new friends could be made, it seems reasonable to conclude that migrants from afar were therefore at a disadvantage. That the reason for this was mainly physical was poor solace. However, the same point must be made as in the last section: the existence of a tendency does not denote absolute levels of behaviour. A great many migrant lodgers - probably over half - did not live with anyone whom they had known before. Furthermore, migration status was probably a minor source of differentiation in lodging patterns. Many people probably obtained an address through their employer or workmates, either before or after arrival. A comparison of male lodgers (excluding children) with male household heads in private dwellings in the Scunthorpe district is suggestive here. Of those lodgers positively identified as employed in the iron industry, 75.7% lived with similarly occupied heads, yet only 57.3% of occupied heads were so employed. The difference between these two proportions is statistically significant⁵⁵, although it may be the case that heads in the iron industry were more likely to take in lodgers than other heads.

Summary

In all three areas of behaviour, some evidence was found of differentiation on the basis of migration status, however this is measured. In each case, though, it is unclear whether the patterns shown reveal a means of coming to terms with a new environment or the result of a failure to integrate. Moreover, patterns of residence and co-residence may well reflect the supply

and workings of the accommodation market rather than any cultural constraints. Indeed, a distinction can be made between the kind of problems which confronted most new arrivals in any destination and the more fundamental, long-term discord which might potentially exist between a migrant and his or her environment. The patterns of behaviour described above in many cases probably reflect such short-term pressures, rather than any fundamental failure to cope with new surroundings.⁵⁶ While the sheer size of a large town made the range of options more bewildering and complex, the same problems must surely have confronted many of those who moved into Grantham and the Scunthorpe district.

Reliable evidence on the longer-term experience of new surroundings is in even shorter supply. In part this is because the relevant indicators are even less clear. Three disparate factors which do seem relevant, and on which a little evidence does exist, are these: the quality of the environment, the maintenance of links with the sending community, and the past experience of the migrant concerned. These can be examined in turn.

The Environment

Living conditions could be an important disamenity of life in many large towns and cities. Those with rural backgrounds may well have felt this most acutely. But conditions in Grantham and the Scunthorpe district do not appear to have been so harsh.

Grantham certainly had its problems. In 1881 there were 5.3 persons per inhabited house, a higher density than in many larger towns⁵⁷, and the town had its fair share of slums. The most notable were probably those in and

around Inner Street in Spittlegate, where in 1877 the Medical Officer of Health reported that eight cottages 'were not fit for human habitation'.⁵⁸ This area was adjacent to Hornsbys' engineering and iron works: in 1870 'the street was covered with the smut and flame-dust' and the residents 'could not keep their windows open in consequence, and to prevent the nuisance they had to keep them closed'.⁵⁹ Yet such conditions were not uniform, as an inspection of the town in the 1860s showed:

'With reference to the dwellings of the labouring population, it may be mentioned that they are often situated in rows on one or both sides of narrow streets and alleys, and that in the more crowded parts of the town (especially therefore in Grantham proper) they are generally grouped in small courts which communicate by covered passages with the adjoining streets. The houses themselves, like the houses of the poor elsewhere, are mostly small and often over-crowded, -some doubtless are dilapidated and dirty, but more commonly they seemed to me to be in fair condition and completely clean. Again, although as I was informed, ventilation is often defective, the means of ventilation for the most part are provided. The courts themselves however are often so confined as to admit of little thorough ventilation, -the courts seem in the great majority of cases to be very well and evenly paved with bricks, but there are many exceptions in which there is either no paving at all, or the paving is very defective, and the courts are consequently more or less uncleanly'.⁶⁰

This is far removed from the tales of squalor and degradation which fill the reports on the large industrial cities, especially those earlier in the century. This is reflected in the crude death rate for the Grantham Registration Sub-District of 17.9 (per 1000 at risk) in 1881, compared with 16.7 for the whole of the county and 20.0 for England as a whole.⁶¹ In all,

'The town of Grantham is somewhat irregularly built, but it has generally an aspect of cleanliness and comfort - The streets seem for the most part well-constructed and fairly kept; and the houses good'.⁶²

And one old inhabitant recollected that even Inner Street was 'a handsome residential district' in the 1880s and 1890s.⁶³

Evidence on conditions in the Scunthorpe district is very sparse. In 1881, the crude death rate for the Winterton Sub-District was only 15.6 per 1000, although this is probably an underestimate as the four townships only constituted 40.3% of the population of this unit.⁶⁴ The four townships apparently suffered a high absolute number of infant deaths, but it is unclear how much of this was due to the age structure of the population.⁶⁵ In 1890 it was said that 'the density and other characteristics of the population are very similar to those of towns'⁶⁶, and in 1881 the four townships contained 5.2 persons per house, compared with a density of 4.6 in the rest of the Sub-District.⁶⁷ Overcrowding seems to have been particularly acute in the mid-1870s with the sudden expansion of the iron industry, but the departure of many of these people in the subsequent depression led to a 'less crowded, and otherwise improved condition' in the townships.⁶⁸ It is also important to remember the still semi-rural nature of these settlements. On balance it seems unlikely that environmental conditions were as bad as those prevailing in many large towns.

Contacts with the Sending Area

Existing studies have suggested this was an important means of reducing a migrant's sense of isolation, and have pointed to the durability of such links over time.⁶⁹ This is supported by the example of John Green, a cashier in the Frodingham Iron Works, whose manuscript diary covering the years 1867-1870 has survived. In 1867 Green recorded 17 visits home to his relatives at Doncaster and Stalybridge, his birthplace. These trips usually occurred on a Saturday, and were by rail. Rather than diminishing over time, they seem to have increased. In 1870 he made 24 such visits, averaging one a fortnight.⁷⁰

If such behaviour was typical, many migrants to the district were maintaining contact with their place of origin on a reasonably long-term basis.

Green's family also paid him return visits. On census night 1881 3.1% of private households in the Scunthorpe district had visitors staying with them. The equivalent figure for Grantham was 13.6%.⁷¹ (The reasons for this difference will be discussed below). In neither location, however, is there evidence to suggest that migrants were any more likely than natives to have visitors, and in Grantham especially it appears that long-distance migrants were the least likely to have visitors staying (Table 9.16).⁷²

Turning to the visitors themselves, 223 of the 260 in the Grantham sample were staying in private households. The remainder were in hotels and inns, together with a few in lodging houses. Of these 223, 180 were born outside Grantham and can be broadly assumed to be temporarily visiting the town from elsewhere. Others were either born in Grantham or had no identifiable birthplace: it is unclear whether these people were visiting from outside or not. In the Scunthorpe district, all 45 visitors were found in private households, of whom 40 had birthplaces outside the four townships. Many of these people were visiting relatives or friends. 15.0% of the 180 non-native visitors in private households in Grantham were living in households headed by a kinsman or someone sharing the same surname. The figure in the Scunthorpe district was also 15.0%. Excluding these people, as well as all those enumerated as members of the visitor's family⁷³, many of the rest were living with people from the same origin. 32.7% of these 'independent' visitors to Grantham had been born within two kilometres of another member of the household in which they were staying, as had 40% of their Scunthorpe district counterparts.

It is clear that many migrants kept in touch with their origins through visits

TABLE 9.16 PERCENTAGE OF PRIVATE HOUSEHOLDS CONTAINING VISITORS,
BY BIRTHPLACE OF HOUSEHOLD HEAD, GRANTHAM SAMPLE AND
FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881

	<u>Birthplace of household head</u>				
	<u>Native</u>	<u>1-49 km</u>	<u>50-99 km</u>	<u>>= 100 km</u>	<u>All</u>
Grantham	13.1 (N=252)	15.0 (N=520)	11.0 (N=118)	11.5 (N=122)	13.6 (N=1012)
Scunthorpe district	3.6 (N=137)	2.8 (N=608)	5.9 (N=85)	2.6 (N=195)	3.1 (N=1025)

Birthplace of household heads (Migrants only)

	<u>Urban</u>	<u>Rural</u>
Grantham	11.8 (N=212)	14.8 (N=467)
Scunthorpe district	2.2 (N=136)	3.3 (N=662)

Source: C.E.Bs.

- Notes:
- 1) County centroids were used to estimate the birthplace distance of those for whom only county of birth is known.
 - 2) Household heads with unidentifiable birthplaces are excluded from the analysis of urban/rural differences.
 - 3) For a definition of the 'urban' and 'rural' categories, see Chapter 6, note 40.

TABLE 9.17 **PERCENTAGE OF INDEPENDENT VISITORS IN PRIVATE HOUSEHOLDS BORN WITHIN 2 KILOMETRES AND 10 KILOMETRES OF AT LEAST ONE PERMANENT HOUSEHOLD MEMBER, BY BIRTHPLACE DISTANCE, GRANTHAM SAMPLE AND FOUR SCUNTHORPE DISTRICT STUDY TOWNSHIPS, 1881**

	<u>Visitor's birthplace</u>			
	<u>Native</u>	<u>1-49 km</u>	<u>>= 50 km</u>	<u>All</u>
<u>Born within 2 kilometres of a household member</u>				
Grantham	87.5 (N=24)	37.5 (N=80)	20.0 (N=30)	42.5 (N=134)
Scunthorpe district	66.7 (N=3)	57.1 (N=14)	- (N=6)	43.5 (N=23)
<u>Born within 10 kilometres of a household member</u>				
Grantham	95.8 (N=24)	55.0 (N=80)	23.3 (N=30)	55.2 (N=134)
Scunthorpe district	66.7 (N=3)	78.6 (N=14)	- (N=6)	56.5 (N=23)

Source: C.E.Bs.

- Notes:
- 1) 'Independent' visitors excludes those visitors who are the wife, child or other kin of another visitor.
 - 2) 'Household members' includes natives and excludes visitors.
 - 3) A 'non-native' visitor is one born outside the study district.
 - 4) Visitors without an identifiable community of birth are excluded from this analysis. County centroids are not used in this Table.

home and by having people to stay. From the other perspective, the presence of kin and friends was obviously a great incentive to visit a particular location. In many cases, such trips doubtless encouraged permanent moves, and thus played an integral role in the migration chain. The possibilities of maintaining such contact on a regular basis would obviously have been easier over shorter distances than longer ones, as Tables 9.16 and 9.17 suggest.⁷⁴ But this is not to argue that the type of destination is largely irrelevant and that distance migrated was the sole source of differentiation. This is shown in the very different levels of visiting in the two study locations shown above. The north Lincolnshire settlements did not possess the general appeal of a large county town. Many of the local visitors to Grantham, for example, were no doubt in town for the annual 'Caring fair', held in the week after census Sunday in 1881.⁷⁵ The May statutes similarly brought in many young male farm servants and, especially, girls seeking a post in domestic service.⁷⁶ Railway excursions and other entertainments were based in the town.⁷⁷ Grantham was a cultural and social centre in a way that the nascent industrial district in the north of the county had not yet become.

This raises the interesting possibility that many more migrants to Grantham had previously visited their new home than had those who moved into the Scunthorpe district. In this case, arrival in the larger urban area may have been less ~~unsettling~~ than life in the semi-rural settlements of the north Lincolnshire iron field.

Background

As well as having visited Grantham or another town before, many migrants had actually lived in one. So far in this discussion attention has focused on

those who moved in from rural areas. Yet many came from quite different backgrounds. 35.4% of male and 29.3% of female migrants aged 15 and above in Grantham had been born in an urban location.⁷⁸ Many others had probably lived in a town since their birth. In all, it seems quite possible that as many as half the migrants to Grantham had already lived in a town of one sort or another and therefore experienced little or no culture shock on arrival. In the case of the Scunthorpe district, the equivalent figures are lower but no less significant. 20.7% of male and 22.1% of female migrants aged 15 and over possessed an 'urban' birthplace.⁷⁹ For these people migration to the Scunthorpe district represented a step down the urban hierarchy. Many had probably never lived anywhere quite so 'rural' before. For others, of course, these ever-growing, thriving communities of strangers must have been a wholly novel experience after life in a small village where the population was declining and scarcely anyone had moved in from very far away.

* * * * *

This chapter has presented a considerable amount of evidence, none of which allows any definitive conclusion. First, the more conventional, census-derived indicators of behaviour were explored. These suggest that some migrants were behaving in ways that can be seen either (a) as a means of integration or (b) as the result of a failure to fully integrate with their new surroundings. It was subsequently argued, however, that such patterns of behaviour were largely a function of the more immediate pressures and constraints which existed in most destinations, and cannot therefore be taken as a definite indication of any fundamental incongruence between a migrant and his/her environment over the longer term. Attention then turned to this topic, which is even more bereft of operational indicators. Three very deficient and diverse factors were examined: environmental conditions, links with sending areas, and the type of background from whence the migrant came. All of

these were deemed to have had a potential influence on a migrant's experience of his or her new community in the longer term. With important qualifications, the weight of evidence in all three areas tends to favour a more optimistic view of the migrant experience.

CHAPTER 10. CONCLUSION

Overview

The preceding chapters have explored various aspects of migration in Victorian Lincolnshire. Attention was focused initially on county-wide patterns of movement and the characteristics of rural depopulation. Chapter 3 outlined population developments in the county at the aggregate level. Lincolnshire in the second half of the nineteenth century saw an absolute fall in its rural population accompanied by the growth of certain urban centres. An attempt was made to break down the county-level figures on net migration into their component flows. The patterns of in-migration, out-migration and emigration thus revealed were found to reflect general developments in economic fortunes. The temporal pattern of rural population growth and decline was seen to accord with national developments whereby most villages witnessed a population peak in the middle decades of the century. Absolute decline began in most villages and hamlets at some point in the century, though little geographical pattern was evident in the timing of the onset of this decline. The assertion that 'remote' places suffered the most severe losses was partly borne out by the available Lincolnshire evidence. Attention then turned to the problem of who was leaving the rural areas. More females left than males, often to take up jobs as domestic servants. The bulk of the employed male exodus consisted of farm workers, though the evidence on the propensity of different occupational groups to migrate is ambivalent. The relative decline in the number of farm employees was considerably greater than that of farmers. The general selectivity of migration was stressed.

Chapter 4 presented a detailed exploration of the nature of rural depopulation. Discussion was centred round the traditional view of rural-urban migration as

a simple response to the 'push' and 'pull' of unequal wage levels. The inadequacy of such an interpretation was suggested. Rural economic developments were not easily correlated with either the spatial or temporal patterns of depopulation. Similarly, the experiences of particular occupational groups fitted badly with a simple depression/depopulation interpretation. Thus a contradiction was found between testimony concerning the regional impact of depression and that concerning the plight of different types of farmer. As far as agricultural labourers were concerned, the decline in their numbers substantially pre-dated the onset of depression. Moreover, this class seems to have fared the least badly in the depression despite constituting the bulk of the exodus. Shortage, rather than glut, seems to have characterised the agricultural labour market in this period.

The supposed detachment of the labourer from the land was also found to be an insufficient cause of rural depopulation. The poor quality of much rural housing was examined too, but its role was unclear. Probably more important was the shortage of housing, especially in its reflection of the pernicious effects of the 'open' and 'closed' parish system.

A statistical model which incorporated some of the quantifiable information available at parish level was tested and found to account for but a small proportion of the total variation in migration patterns. In sum, material factors seemed to have played but a partial role. An examination of contemporary testimony suggested the importance of more subjective, qualitative influences. According to this evidence, bright lights were more important than higher wages in drawing rural dwellers into the towns and cities. The mid- and later-Victorian countryside was characterised by a growing feeling of restlessness and dissatisfaction. A whole range of developments both reflected this and helped to bring it about. These included re-structured social relationships and growing class-consciousness,

agricultural trade unionism, the increasing political importance and awareness of the rural workforce, the growing county press, the rise in levels of literacy, the unsettling effects of education, and the revolution in transport and decline in village isolation. In addition, it was argued that a number of longer-established aspects of rural life helped facilitate a high level of migration. Finally, it was stressed that migration to the towns in this period must be seen against a high level of movement within the countryside. This is in accord with more recent work which has exploded the myth of static rural populations in the past.

Attention turned next to an examination of migration patterns into two of Lincolnshire's growing urban/industrial centres using the 1881 census. Chapter 5 described the mushroom growth of the Scunthorpe district in the north of the county. Like many other new centres which sprang into existence in the nineteenth century, this was based upon a single industry and depended heavily on in-migration for its initial growth. The structure of the labour force was described in some detail. The jobs available in the new iron industry were exclusively male, and this was reflected in the sex ratio. Little work was available for females or adolescents. The district thus possessed a distinctive population structure. The pattern of migration into the district was then outlined. Like so many places, the Scunthorpe district experienced considerable population turnover, most of it not captured in the census snapshot. However, the general volume of in-migration reflected the pace of expansion in the local industry. Lastly, the spatial pattern of migration was revealed. Although remote and not long established, the district possessed a remarkably wide migration field.

Chapter 6 explored the patterns and processes of migration among those employed in the Scunthorpe iron industry. Discussion centred round the assumption in some of the literature that migration differentials were largely

skill-related. The nature of working life in the different sectors of the north Lincolnshire iron industry was analysed. Differences were found to exist not just in the levels of skill required but also in the wider culture surrounding each kind of work. These differences were reflected in migration patterns. Labouring in the ironstone quarries, for example, was an easier transition from farm work than was labouring in the blast furnaces. Iron miners thus tended to be more heavily drawn from local rural sources than were furnace labourers. In addition, the presence of many long-distance migrants from rural, agricultural backgrounds suggested that migration was as much a function of labour recruitment strategies and the operation of job information networks as it was of any skill-determined variation in the willingness to move.

Chapter 7 examined the contrasting destination of Grantham. In general, migration into this town exhibited more 'orthodox' characteristics than did that into the Scunthorpe district. Grantham was a mature town with a more broadly-based economy. Migrants came from an appropriately broader spread of origins. The higher provision of jobs for females and adolescents ensured a more conventional age-structure and meant that males were in the minority. Females were especially employed as domestic servants, and were drawn from the town's rural hinterland. The male migration field was wider and exceeded that of Scunthorpe. Grantham was also, of course, less dominated by migrants than was the Scunthorpe district. By 1881 Grantham had developed into a major centre of the agricultural engineering industry, and migration among these engineering employees was compared with that among the Scunthorpe iron workers. The former presented a far more conventional picture of skill-related migration differentials.

In Chapter 8 attention turned to another aspect of migration into the two study destinations. The available census data were manipulated to give a

rough indication of the relative importance of 'family' and 'solo' migration to the two places. The movement of family units was found to be important in both cases, suggesting that the popular conception of migrants as young and unmarried is rather inaccurate. This applies especially to the Scunthorpe district, where family in-migration was particularly marked. In contrast, Grantham seems to have attracted many more boys and girls in their teens. These patterns were very probably related to the nature of the job opportunities in the two places. The limited applicability of existing 'family economy' perspectives was also brought out here. These tend to stress the earning power of wives and children, yet my evidence suggested that the destination with the least to offer in terms of family employment paradoxically experienced the most family migration. As far as the iron workers at least are concerned, the high level of family movement to Scunthorpe probably reflects several other factors: the decline of some other iron centres in the 1870s; the traditionally high level of mobility among iron families; the fact that iron wives rarely worked anyway and so did not surrender a paid job by moving; and, lastly, the fact that early marriage was part of the whole cultural milieu of iron communities and that to have a wife (and therefore children) was of material advantage despite her lack of earning power.

Finally, Chapter 9 adopted a more subjective approach in examining the 'assimilation' of migrants to their host communities. Following a critique of existing interpretations of this issue and of the methodologies that have been used, statistical evidence from the two study destinations was presented. The evidence on occupations and patterns of residence and co-residence did suggest a certain 'separateness' on the part of migrants. However, interpreting this finding was really impossible. It was wholly unclear whether the behaviour observed resulted from a failure to integrate or should be seen as a means by which assimilation was attempted. The need to assess the

experience over the longer term was emphasised. With this in mind, some very limited evidence from the study locations was presented concerning environmental conditions, the maintainance of contacts with the sending area and the previous residences of those migrating. For what it is worth, a tentatively 'optimistic' assessment of the migrant experience was reached.

Themes

Beyond the conclusions presented within the context of each chapter in the thesis, several more general themes suggest themselves.

1) The crucial importance of relating migration patterns to the background of those involved is clear.¹ This is not just a matter of placing movers into various 'birthplace distance' categories. These have little meaning in themselves. Rather, the patterns found must be interpreted in the light of the previous experiences of the migrants themselves. Thus the shape of labour migration to the Scunthorpe district was fundamentally linked to the previous job histories and upbringing of those who took up employment in the different sectors of the local iron industry. Again, the experiences of individual migrants within their new destinations was probably influenced by where they had lived before.

2) Though lacking direct evidence, the thesis has indicated the important role played by information networks in structuring migration between any two places. Herein lies the key to the apparently arbitrary pattern of most migration fields. Beyond those engaged in 'special industrial migration'² from specific centres and those who moved from nearby sources, the origins of many other migrants appear almost random. For example, we saw that

considerable numbers moved to the north Lincolnshire iron district from distant sources deep in rural Essex and Devon. The evidence on labour recruitment and on residential patterns in the two study locations suggested the importance of kin and co-villagers as sources of information, but the genesis and maintainance of such migrations was unclear. So, too, was their demise. The Devon and Essex streams, for example, appeared to have operated within quite a short period of time. We do not know why they dried up.

3) The thesis lends additional weight to the now well-established emphasis upon the family as the containing context of much mobility.³ The importance of familial considerations has been shown to have operated even when the attributes of the 'family economy' as usually defined were seen not to apply. And this is more than just a recognition that family movement could be numerically quite high: those who moved 'solo' usually did so at particular stages of the life cycle suggesting family pressures in the sending community and/or age-specific opportunities in the receiving community (teenagers moving to Grantham).

4) Considerable variation could exist between particular migrant streams and between particular sub-groups within any stream. This was clearly shown in the two case study locations. Different places could exhibit very idiosyncratic patterns of in- and out-migration. This implies that even at the structural level a particular migration is the result of distinct economic, social and cultural structures in the sending and receiving societies, rather than just a function of 'propinquity'.⁴ Attempts to deduce crude 'laws' governing migration would thus seem flawed.⁵ So, too, I would argue is the study of spatial patterns in isolation from the wider context in which migration occurs.⁶ Concepts like 'distance-decay', 'intervening opportunities', 'intervening obstacles' and 'gravitational pull' are only really of descriptive value.⁷ They

explain very little. And as generalisations they conceal more than they reveal. Real interest lies, rather, in the differences between particular migrations, and in the forces that underlay those differences.

5) The importance of more qualitative and subjective factors in migration causation is clearly shown at various points in the thesis. Thus Chapter 4 explicitly relegated the role of wage levels in accounting for rural depopulation, and the material on labour migration into the Scunthorpe district (Chapter 6) pointed to wider cultural factors being just as important as skill differentials in determining the origins of the industrial workforce. Again, it was argued that the high level of family movement into this district in part reflected a cultural characteristic of iron workers. In general, it seems scholars may have placed too much emphasis upon the material forces underlying migration.⁸

6) There is a need to distinguish between macro- and micro-level behaviour.⁹ Aggregate patterns conceal much important information. For example, net migration balances tend to reflect spatial disparities in economic activity, leading to an over-simplified view of causation.¹⁰ Yet within such a structural constraint, the movement (or non-movement) of particular persons and families reflects a whole host of other considerations. And the kind of evidence used affects our interpretations:

'Macrolevel studies are superior in describing broad patterns of migration whereas microlevel studies are superior in explaining migration behaviour'.¹¹

7) Lastly, this point in turn suggests the need to move away from a deterministic, aggregate, structural approach which sees migrants as calculative, rational economic utility maximisers¹², towards a more subjective, individual-centred 'behaviourist' mode. For as Haberkorn has written:

'What objectively may appear to be the same variables are often perceived to be quite different from an individual perspective'.¹³

And

'...it is not so much the actual factors at origin and destination as the perception of these factors which results in migration'.¹⁴

It is at this point that the real limitations of a project such as this become apparent. A full understanding of the forces behind migration requires a knowledge of individual motives and of the process by which individual decisions to migrate were taken.¹⁵ In studies of contemporary populations a 'survey' methodology can be used. Respondents are asked questions about why they migrated (or stayed put) and the nature and strength of their doubts.¹⁶ This cannot be done for populations in past time. Oral history methods do not reach the Victorian period. Subjective testimony does exist, but there is precious little and most comes from observers rather than the migrants themselves.¹⁷ We have only the dry record of the census. Meaning must be inferred from observed behaviour.

On this pessimistic note, it might be asked whether research such as this can ever adequately answer the questions in which we are interested. The important point, it seems to me, is to remember that census information can do no more than reflect possible processes at work. Above all, we should heed Taylor's warning that in too many studies 'the motives for migration are assumed to reside exclusively in the characteristics of the migrants themselves'.¹⁸

Suggestions

It is useful to end with some suggestions for future work in this field.

More work is definitely needed on other destinations. This study found interesting differences between two types of population centre; others will reveal the wider applicability of these findings.

Other occupational groups would also bear examination.¹⁹ This thesis has emphasised the importance of labour recruitment and job information networks. Migration patterns among very well-documented groups of workers might cast some more light on these topics. The records of companies and trade unions could be especially useful here.

Inadequate attention has been given to the impact of migration on the sending communities, to those who were leaving growing centres (the 'counter-flow') and to those who did not move, the 'stayers'.²⁰ We also know woefully little about how and why particular migrant streams begin, build up and then die out – often abruptly.

Emigration abroad needs more research, as do gender differences in migration patterns.

Most of all, perhaps, a lot more attention needs to be paid to migration within and out of rural areas. A large-scale project linking census material over the four available decades might provide useful insights into the impact and pattern of rural depopulation among different groups of people and places. This would be especially productive if postponed until the 1891 census books are available.²¹

It is clear that any major advances in our understanding are going to depend on more sophisticated handling of the manuscript census data. More

longitudinal studies are needed in which information in successive censuses is linked together, and/or in which census details are linked with those in other records such as vital registers.²² This would allow more definite connections between migration and phenomena such as fertility, nuptiality and household structure to be made.²³ Little has been done in this respect, mainly because of the difficulties of using available demographic materials for nominal record linkage. Compared to the 'continuous' registers kept in Sweden, for example, the British records are woefully inferior.²⁴ It has proved fairly easy to trace the 'persistent' back in time²⁵, but the limited exercise carried out for this project showed how difficult it is to locate those who moved in to any particular study area (Chapter 2). No historical linkage exercise can provide a truly 'representative' sample as the ability to make a positive link itself varies from case to case²⁶, but locating migrants is even more problematic, as a successful trace is dependent upon the extent and quality of information given in the 'base' census. In this research, for example, 1881 census details were used to try to pinpoint a person's location in 1871. This problem does not arise when tracing the persistent, as the two census listings for the same area are simply compared. To replicate this method for migrants would entail a comparison of the 'base' district census with every census in the whole of the rest of the country ten years before. This is an impossible task at present, though restricting the search to adjacent areas could provide information on local migrants. Notwithstanding all these difficulties, longitudinal studies of particular migrant groups promise to usefully supplement existing knowledge.²⁷

There is one set of linked data which has hitherto been untapped. This is the work of countless individuals who have traced their own family history. Of course, the material that has been collected is not systematic, uniform or 'representative'²⁸, and the bulk of the information remains solely in the hands

of thousands of individual family historians. To collate, store and analyse all the data would be a major research project requiring considerable finance and resources. However, more and more enthusiasts are coming together in local family history societies and are combining the fruits of their labour in systematic form. In Chapter 4 I used material from the Lincolnshire family history society to explore the migration patterns among members' traced ancestors.²⁹ Published material like this is unusual, but seems to be coming more widespread.

APPENDIX A. CALCULATION OF ESTIMATES OF INTERCENSAL MIGRATION FLOWS USING BAINES' METHOD

Dudley Baines (1972) has devised a method of estimating the intercensal flow of natives out of any particular county, net of returns, using the birthplace information in the published census. The crux of the method is also its largest source of potential inaccuracy: the estimation of a migrant death rate. First, the method assumes that in any large population of non-natives, half are aged 15-34, with the remainder possessing the age distribution of the population as a whole. Second, it is based upon a fixed ratio between current intercensal in-migrants and surviving earlier arrivals held to have prevailed in a 'standard' county in every census. Combining these two assumptions, Baines estimates that the enumerated non-natives in any county generally possessed an overall death rate two-thirds that of England and Wales as a whole. The national rate is preferable to any local rate as 'there is no way of showing whether migrants were more or less susceptible than natives to the new environment or occupation' and 'its use is as logical (or illogical) as any other'.¹

The method is repeated, first assuming that the migrant population in any county has an age-structure (and therefore death rate) identical to the rest of the population, then again assuming the whole of the migrant population (even those who arrived in previous decades) is aged 15-34. The true age structure must lie somewhere between these two extremes. Thus the true migrant death rate must fall somewhere between those estimated on the basis of these two extremes. This allows us to calculate an upper and lower estimate of inter-censal migration between which the true amount lies and thus provide a margin of error to surround our preferred estimate based on the assumption of a 'two-thirds' death rate.

There are other sources of potential inaccuracy in the method. First, the totals of births and deaths are only available for Registration Counties, while birthplaces are given by Civil County. This necessitates an adjustment to the former totals. Second, in the case of the 1850s and 1860s it is necessary to correct for the under-enumeration of births. Boundary changes complicate matters further, though in the case of Lincolnshire this only entailed a small adjustment to the 1901 figures.

An additional problem arises when calculating the 1851-60 flows, and this renders the estimates for that decade especially suspect. Unlike its successors, the published census of 1851 gives the Civil County of birth of the inhabitants of each Registration County. To make the 1851 data compatible with that in other years the number of natives within Lincolnshire was increased by the proportional excess population of the Civil County over the Registration County. In other words, it was assumed that the Civil County excess area contained the same proportion of natives as the coextensive portion. This is clearly erroneous, as these excess areas almost certainly contained a higher proportion of non-natives than most other parts of the county by virtue of their peripheral location, but no better adjustment can be made. Another problem with the 1851 census is its failure to breakdown birthplace information by sex. This compromises the estimates still further, as the combined death rate must be used irrespective of the sex ratio in the populations involved.

Despite all these limitations, Baines' method does allow us to assess the broad components concealed within the net migration figures. The calculations involved are illustrated in the following worked example.

Worked Example

Problem: to estimate the flow of male natives from Lincolnshire, 1871-81 (net of returns).

1) Adjustment of registration data.

Total population, Registration County 1871	428075
Total population, Registration County 1881	463061
Total population, Civil County 1871	436599
Total population, Civil County 1881	469919

So the Registration County was only

$$\frac{428075 + 463061}{436599 + 469919} \times 100 = 98.3\% \text{ of the Civil County, 1871-80}$$

There were 74149 male births in the Registration County, 1871-80, so there were approximately $74149 \times 100/98.3 = 75429$ births in the Civil County.

(For earlier decades the birth total is here corrected for underregistration using the county adjustment factors given in Teitelbaum (1974)).

Similarly, the number of deaths in the Civil County, 1871-80, was about $42779 \times 100/98.3 = 43517$.

2) To calculate the number of male natives leaving Lincolnshire for all destinations in the decade.

The mean total male population in Lincolnshire (Civil County) 1871-80 minus the mean native male population gives the mean size of the male non-native group in the county, 1871-80:

$$(216762 + 235219)/2 - (184561 + 192541)/2 = 37439.5$$

Assuming the death rate among this migrant population was two-thirds that for England and Wales as a whole, over the 10 years the following number would have died:

$$\frac{37439.5 \times 15.07}{1000} \times 10 = 5642$$

TABLE A.1 RESULTS OF WORKED EXAMPLE

Net movement of Lincolnshire males
out of Lincolnshire, 1871-80

	<u>To all destinations</u>	<u>To the rest of England and Wales</u>	<u>To Ireland, Scotland and abroad</u>
<u>Death rate assumptions</u>			
(a) Migrant group has same death rate as nation (clearly too high)	32397	27793	4604
(b) Migrant group has 2/3 death rate of nation (preferred assumption)	29575	22913	6662
(c) Migrant group is composed only of those aged 15-34 (death rate clearly too low)	26848	18198	8650

So the number of native deaths was $43517 - 5642 = 37875$.

Now, if no natives had left the county there would have been 184561 (natives in 1871) plus 75429 (births, 1871-80) minus 37875 (native deaths) = 222115 natives enumerated in Lincolnshire in 1881. But only 192541 were actually enumerated. So

$$222115 - 192541 = 29574$$

natives must have left the county for all destinations, 1871-80.

3) To calculate the number of new arrivals of Lincolnshire natives into other counties in England and Wales, 1871-80.

There were 58168 male natives of Lincolnshire enumerated in other counties in 1871, and 71322 in 1881. Of these,

$$\frac{58168 + 71322}{2} \times \frac{15.07}{1000} \times 10 = 9757$$

would have died 1871-80, assuming a 'two-third' migrant death rate again.

But in 1881, 71322 natives of Lincolnshire were enumerated outside the county. So the number of Lincolnshire natives who moved out of the county to other parts of England and Wales, 1871-80, was

$$71322 - 58168 + 9757 = 22911.$$

4) To derive the number of Lincolnshire natives who moved abroad or to Ireland or Scotland.

If 29574 left the county for all destinations, and 22911 arrived in other English and Welsh counties, 1871-80, then $29574 - 22911 = 6663$ must have emigrated abroad or gone to Ireland or Scotland.

5) The whole exercise is repeated twice using different assumptions about migrant age-structure. This provides an upper and lower limit within which the true value must lie.

The results are shown in Table A.1.

To calculate the estimated flow from the rest of England and Wales into Lincolnshire of natives of other English and Welsh counties, the method is repeated treating the rest of England and Wales as the single base 'county'.

APPENDIX B. LIST OF 606 LINCOLNSHIRE RURAL COMMUNITIES

The following is a list of the 606 rural communities used in Chapter 3. Places with the same name are designated 'A' and 'B'.

ABY
 ADDLETHORPE
 AISTHORPE
 ALGARKIRK
 ALKBOROUGH
 ALLINGTON
 ALTHORPE
 ALVINGHAM
 AMCOTTS
 ANCASTER
 ANDERBY
 ANWICK
 APLEY
 ASGARBY A
 ASGARBY B
 ASHBY BY PARTNEY
 ASHBY CUM FENBY
 ASHBY DE LA LAUNDE
 ASHBY, WEST
 ASLACKBY
 ASTERBY
 ASWARBY
 ASWARDBY
 ATTERBY
 AUBOURN
 AUNSBY
 AUTHORPE
 AYLESBY
 BARDNEY
 BARHOLM
 BARKSTON
 BARKWITH, EAST
 BARKWITH, WEST
 BARLINGS
 BARNETBY LE WOLD
 BARNOLDBY LE BECK
 BARROWBY
 BASSINGHAM
 BASSINGTHORPE
 BASTON
 BAUMBER
 BECKINGHAM
 BEELSBY
 BEESBY LE MARSH
 BELCHFORD

BELLEAU
 BELTON A
 BELTON B
 BENNINGTON
 BENNINGTON, LONG
 BENNIWORTH
 BICKER
 BIGBY
 BILLINGBOROUGH
 BILLINGHAY
 BILSBY
 BINBROOK
 BIRTHORPE
 BISCATHORPE
 BISHOP NORTON
 BITCHFIELD
 BLANKNEY
 BLOXHOLM
 BLYBOROUGH
 BLYTON
 BOLINGBROKE, OLD
 BONBY
 BOOTHBY (GRAFFOE)
 BOOTHBY PAGNELL
 BOTTESFORD
 BOULTHAM
 BRACEBOROUGH
 BRACEBY
 BRACKENBOROUGH
 BRADLEY
 BRAMPTON
 BRANT BROUGHTON
 BRATOFT
 BRATTLEBY
 BRAUNCEWELL
 BRIGSLEY
 BRINKHILL
 BROCKLESBY
 BROTHERTOFT
 BROUGHTON
 BROXHOLME
 BUCKNALL
 BURGH ON BAIN
 BURRINGHAM
 BURTON BY LINCOLN

BURTON LE COGGLES
 BURTON PEDWARDINE
 BURTON UPON STATHER
 BURWELL
 BUSLINGTHORPE
 BUTTERWICK
 BUTTERWICK, EAST
 BUTTERWICK, WEST
 BYTHAM, LITTLE
 CABOURNE
 CADNEY CUM HOWSHAM
 CAENBY
 CALCEBY
 CALCETHORPE
 CAMMERINGHAM
 CANDLESBY
 CAREBY
 CARLBY
 CARLTON LE MOORLAND
 CARLTON SCROOP
 CARLTON, CASTLE
 CARLTON, GREAT
 CARLTON, LITTLE
 CARLTON, NORTH
 CARLTON, SOUTH
 CASTLE BYTHAM
 CAWKWELL
 CAWTHORPE, LITTLE
 CAYTHORPE
 CLAXBY A
 CLAXBY B
 CLAXBY PLUCKACRE
 CLAYTHORPE
 CLEATHAM
 COATES
 COATES, GREAT
 COATES, LITTLE
 COCKERINGTON, NORTH
 COCKERINGTON, SOUTH
 COLD HANWORTH
 COLEBY
 COLSTERWORTH
 CONINGSBY
 CONISHOLME
 CORBY GLEN
 CORRINGHAM
 COTES, NORTH
 COUNTHORPE
 COVENHAM ST BARTHOLOMEW
 COVENHAM ST MARY
 COWBIT
 CRANWELL
 CREETON
 CROFT
 CROXBY

CROXTON
 CULVERTHORPE
 CUMBERWORTH
 CUXWOLD
 DALBY
 DALDERBY
 DEEPING FEN
 DEEPING ST JAMES
 DEEPING, WEST
 DEMBLEBY
 DENTON
 DIGBY
 DODDINGTON
 DODDINGTON, DRY
 DOGDYKE
 DONINGTON
 DONINGTON ON BAIN
 DORRINGTON
 DOWSBY
 DRIBY
 DUNHOLME
 DUNSBY
 DUNSTON
 EAGLE
 EASTON
 EDENHAM
 EDLINGTON
 ELKINGTON, NORTH
 ELKINGTON, SOUTH
 ELSHAM
 ENDERBY, BAG
 ENDERBY, MAVIS
 ENDERBY, WOOD
 EVEDON
 EWERBY
 FALDINGWORTH
 FARFORTH (FARWORTH)
 FARLESTHORPE
 FENTON A
 FENTON B
 FERRIBY, SOUTH
 FERRY, EAST
 FILLINGHAM
 FIRSBY
 FIRSBY, EAST
 FIRSBY, WEST
 FISHTOFT
 FISKERTON
 FLEET
 FLIXBOROUGH
 FORTY FOOT BANK, NORTH
 FOSDYKE
 FOSTON
 FOTHERBY
 FRAMPTON

FREISTON
 FRIESTHORPE
 FRISKNEY
 FULBECK
 FULLETBY
 FULSTOW
 GARTHORPE
 GATE BURTON
 GAUTBY
 GAYTON LE MARSH
 GAYTON LE WOLD
 GEDNEY
 GLENTHAM
 GLENTWORTH
 GOLTHO
 GONERBY, GREAT
 GOSBERTON
 GOULCEBY
 COXHILL
 GRAINSBY
 GRAINTHORPE
 GRASBY
 GRAYINGHAM
 GREATFORD
 GREETHAM
 GREETWELL
 GRIMOLDBY
 GRIMSBY, LITTLE
 GUNBY ST NICHOLAS
 GUNBY ST PETER
 HABROUGH
 HACEBY
 HACKTHORN
 HACONBY
 HADDINGTON
 HAGNABY
 HAGWORTHINGHAM
 HAINTON
 HALE, GREAT
 HALE, LITTLE
 HALLINGTON
 HALTHAM UPON BAIN
 HALTON HOLEGATE
 HALTON, EAST
 HALTON, WEST
 HAMERINGHAM
 HANNAH (HANNAY)
 HAREBY
 HARLAXTON
 HARMSTON
 HARPSWELL
 HARRINGTON
 HATCLIFFE
 HATTON
 HAUGH

HAUGHAM
 HAWERBY
 HAXEY
 HAYDOR (HEYDOUR)
 HEALING
 HEAPHAM
 HECKINGTON
 HEIGHINGTON
 HELPRINGHAM
 HEMINGBY
 HEMSWELL
 HIBALDSTOW
 HOGSTHORPE
 HOLME
 HOLTON CUM BECKERING
 HOLTON LE CLAY
 HOLYWELL
 HONINGTON
 HORBLING
 HORKSTOW
 HORSINGTON
 HOUGH ON THE HILL
 HOUGHAM
 HOWELL
 HUMBERSTON
 HUMBY, LITTLE
 HUNDLEBY
 HUTTOFT
 HYKEHAM, NORTH
 HYKEHAM, SOUTH
 IMMINGHAM
 INGHAM
 INGOLDMELLS
 INGOLDSBY
 IRBY IN THE MARSH
 IRBY UPON HUMBER
 IRNHAM
 KEADBY
 KEAL, EAST
 KEAL, WEST
 KEDDINGTON
 KEELBY
 KEISBY
 KELBY
 KELSEY, NORTH
 KELSEY, SOUTH
 KELSTERN
 KETTLETHORPE
 KEXBY
 KILLINGHOLME, NORTH
 KILLINGHOLME, SOUTH
 KINGERBY
 KIRKBY (CUM OSGODBY)
 KIRKBY GREEN
 KIRKBY LA THORPE

KIRKBY ON BAIN
 KIRKBY UNDERWOOD
 KIRKBY, EAST
 KIRKSTEAD
 KIRMINGTON
 KIRMOND LE MIRE
 KIRTON
 KNAITH
 KYME, NORTH
 KYME, SOUTH
 LACEBY
 LANGTON BY SPILSBY
 LANGTON BY WRAGBY
 LANGTON NEAR HORNCASTLE
 LAUGHTON A
 LAUGHTON B
 LAVINGTON (LENTON)
 LEA
 LEADENHAM
 LEAKE
 LEASINGHAM
 LEGBOURNE
 LEGSBY
 LEVERTON
 LIMBER, GREAT
 LINWOOD
 LISSINGTON
 LONDONTORPE
 LOUND AND TOFT
 LUDBOROUGH
 LUDDINGTON
 LUDFORD
 LUSBY
 MALTBY LE MARSH
 MANBY
 MANTHORPE
 MANTON
 MAREHAM LE FEN
 MAREHAM ON THE HILL
 MARKBY
 MARSH CHAPEL
 MARSTON
 MARTIN A
 MARTIN B
 MARTON
 MELTON ROSS
 MESSINGHAM
 METHERINGHAM
 MININGSBY
 MINTING
 MOORBY
 MORTON
 MOULTON
 MUCKTON
 MUMBY

NAVENBY
 NETTLEHAM
 NETTLETON
 NEWTON
 NEWTON BY TOFT
 NEWTON LE WOLD
 NEWTON UPON TRENT
 NOCTON
 NORMANBY (BY SPITTAL)
 NORMANBY LE WOLD
 NORMANTON
 NORTHORPE
 NORTON DISNEY
 ORBY
 ORMSBY, NUN (NORTH)
 ORMSBY, SOUTH
 OSBOURNBY
 OSGODBY
 OWERSBY, NORTH
 OWERSBY, SOUTH
 OWMBY
 OWSTON(FERRY)
 OXCOMBE
 PANTON
 PARTNEY
 PICKWORTH
 PILHAM WITH GILBY
 PINCHBECK
 POINTON
 PONTON, GREAT
 PONTON, LITTLE
 POTTER HANWORTH
 QUADRING
 QUARRINGTON
 RAITHBY
 RAITHBY CUM MALTBY
 RANBY
 RAND
 RASEN, MIDDLE
 RASEN, WEST
 RAUCEBY, NORTH
 RAUCEBY, SOUTH
 RAVENDALE, EAST
 REDBOURNE
 REEPHAM
 RESTON, NORTH
 RESTON, SOUTH
 REVESBY
 RIBY
 RIGSBY
 RIPPINGALE
 RISEHOLME
 ROPSLEY
 ROTHWELL
 ROUGHTON

ROWSTON	STAPLEFORD
ROXBY CUM RISBY	STEEPING, GREAT
RUCKLAND	STEEPING, LITTLE
RUSKINGTON	STENIGOT
SALEBY	STEWTON
SALMONBY	STICKFORD
SAPPERTON	STICKNEY
SAUSTHORPE	STIXWOULD
SAXBY (BY BARTON UPON HUMBER)	STOKE, NORTH
SAXBY (BY LINCOLN)	STOKE, SOUTH
SAXILBY	STOW AND NORMANBY
SCAMBLESBY	STOWE (BY MARKET DEEPING)
SCAMPTON	STRAGGLETHORPE
SCARLE, NORTH	STROXTON
SCARTH0	STRUBBY
SCAWBY CUM STURTON	STUBTON
SCOPWICK	STURTON AND BRANSBY (STURTON BY STOW)
SCOTHERN	STURTON, GREAT
SCOTTER	SUDBROOKE
SCOTTON	SURFLEET
SCRAFIELD	SUTTERBY
SCREDINGTON	SUTTERTON
SCREMBY	SUTTON LE MARSH (SUTTON ON SEA)
SCRIVELSBY	SWABY
SEARBY CUM OWMBY	SWALLOW
SEDGEBROOK	SWARBY
SEMPRINGHAM	SWATON
SIBSEY	SWINDERBY
SIXHILLS	SWINETHORPE
SKELLINGTHORPE	SWINHOPE
SKENDLEBY	SYSTON
SKIDBROOKE	TALLINGTON
SKILLINGTON	TATHWELL
SKINNAND	TEALBY
SKIRBECK	TEMPLE BRUER
SLEAFORD, OLD	TETFORD
SNARFORD	TETNEY
SNELLAND	THEDDLETHORPE ALL SAINTS
SNITTERBY	THEDDLETHORPE ST HELEN
SOMERBY A	THIMBLEBY
SOMERBY B	THORESBY, NORTH
SOMERCOTES, NORTH	THORESBY, SOUTH
SOMERCOTES, SOUTH	THORESWAY
SOMERSBY	THORGANBY
SOTBY	THORNTON
SOUTHORPE	THORNTON CURTIS
SPANBY	THORNTON LE MOOR
SPRIDLINGTON	THORPE IN THE FALLOWS(WEST THORPE)
SPRINGTHORPE	THORPE ON THE HILL
STAINBY	THORPE ST PETER
STAINFIELD	THORPE TILNEY
STAINTON BY LANGWORTH	THREEKINGHAM
STAINTON LE VALE	THURLBY A
STAINTON, MARKET	THURLBY B
STALLINGBOROUGH	TIMBERLAND

TOFT NEXT NEWTON	WINCEBY
TORKSEY	WINTERINGHAM
TORRINGTON, EAST	WINTHORPE
TORRINGTON, WEST	WISPINGTON
TOTHILL	WITHAM ON THE HILL
TOYNTON ALL SAINTS	WITHAM, NORTH
TOYNTON ST PETER	WITHAM, SOUTH
TOYNTON, HIGH	WITHCALL
TOYNTON, LOW	WITHERN
TRUSTHORPE	WOOLSTHORPE
TUMBY	WOOTTON
TUPHOLME	WORLABY A
TWIGMOOR	WORLABY B
TYDD ST MARY	WRANGLE
UFFINGTON	WROOT
ULCEBY A	WYBERTON
ULCEBY B	WYHAM CUM CADEBY
UPTON	WYKEHAM, EAST
USSELBY	WYVILLE WITH HUNGERTON
UTTERBY	YADDLETHORPE
WADDINGHAM	YARBOROUGH (YARBURGH)
WADDINGWORTH	
WAITHE	
WALCOT A	
WALCOT B	
WALESBY	
WALMSGATE	
WALTHAM	
WASHINGBOROUGH	
WELBOURN	
WELBY	
WELL	
WELLINGORE	
WELTON	
WELTON LE MARSH	
WELTON LE WOLD	
WESTBOROUGH	
WESTON	
WHAPLODE	
WHAPLODE DROVE	
WHISBY	
WHITTON	
WICKENBY	
WIGTOFT	
WILKSBY	
WILLINGHAM (BY STOW/GAINSBOROUGH)	
WILLINGHAM, CHERRY	
WILLINGHAM, NORTH	
WILLINGHAM, SOUTH	
WILLOUGHBY	
WILLOUGHBY, SCOTT	
WILLOUGHBY, SILK	
WILLOUGHTON	
WILSFORD	
WILSTHORPE	

APPENDIX C. MULTIPLE REGRESSION ANALYSIS OF LINCOLNSHIRE PARISH-LEVEL DATA

Much writing on migration has attempted to weigh up the relative importance of various contributory factors. Attempts have even been made to measure the exact contribution of particular causes using multivariate analysis.¹ Such exercises are of limited utility for two reasons. First, of course, they must assume that underlying patterns can be inferred from aggregate behaviour. Migration was an intensely individual phenomenon, and while many people were motivated by similar forces, the particular balance of those forces differed from one person to another. Individual, family, and even community-level influences are usually ignored in analyses of inter-county life-time movement based on the published census. Second, because of the deficiencies of the available information most variables imperfectly reflect particular forces held to be at work. The percentage of the population living in towns has been used, for example, as a proxy for urban job opportunities in a county.² Less corporeal factors can cause similar problems: the amount of sunshine was used as a proxy for climate and found to be 'of some importance' in one study of Victorian inter-county migration.³

Nevertheless, a brief exercise was conducted for this project using the individual rural community as the unit of analysis. The material available at community-level is even poorer than county information. Only a handful of even the most quantifiable potential factors can be derived. Most notably, the economic variables which county-level studies suggest are important are not available. This attempt uses published information about the 606 Lincolnshire villages and hamlets referred to in Chapter 3. The following model was used:

$$MD \text{ (or FD)} = f(\text{Pop71}, \text{Males71}, \text{Crowding71}, D)$$

where

MD (FD) = the proportionate male (female) population decline between 1871 and 1881

Pop71 = total population size in 1871

Males71 = proportion of the 1871 population who were males

Crowding71 = the number of persons per inhabited house in 1871

D = three dummy variables representing landownership in terms of the Open/Closed dichotomy.⁴
(D1='More Closed', D2='Less Closed',
D3='Less Open', default='More Open')

The variables are entered into the equation one by one using the forward stepwise method. The variable entered at each step is that which most reduces the remaining amount of unexplained variance.⁵

Only those 307 communities whose population declined between 1871 and 1881 are included in this part of the analysis. The results are shown in Table C.1.

The whole exercise was repeated with the dependent variable replaced by the number of independent (non-child) Lincolnshire migrants enumerated in the Scunthorpe district and in the one-in-three sample of Grantham in the 1881 census (see Chapter 2). The model becomes

$$\text{Migrants} = f(\text{Pop71}, \text{Males71}, \text{Crowding71}, \text{Distance}, D)$$

where

Migrants = the number of Lincolnshire-born independent (non-child) migrants present in 1881 as a proportion of their birthplace population in 1871

Distance = the straight-line distance between birthplace and Scunthorpe/Grantham

This model allows us to introduce distance as a variable. All 606 communities are included in this part of the exercise (minus one case with

TABLE C.1 STANDARDIZED OLS STEPWISE REGRESSION COEFFICIENTS, FIRST MODEL

Dependent Variable	Independent Variables					R^2	<u>F-statistic</u>	<u>F-statistic for combined effects of D1, D2, D3</u>	(N)
	<u>Pop71</u>	<u>Males71</u>	<u>Crowd-ing71</u>	<u>D1</u>	<u>D2</u>	<u>D3</u>			
MD	-0.28 (4.41)*	0.23 (4.32)*	0.13 (2.33)*	$\begin{bmatrix} -2.99 \\ -0.14 \end{bmatrix}$ (1.94)	$\begin{bmatrix} -1.34 \\ -0.09 \end{bmatrix}$ (1.09)	$\begin{bmatrix} -0.97 \\ -0.06 \end{bmatrix}$ (0.89)	0.15	8.73*	1.26 (307)
FD	-0.28 (4.73)*	-0.34 (6.67)*	0.09 (1.61)	$\begin{bmatrix} 0.66 \\ 0.03 \end{bmatrix}$ (0.38)	$\begin{bmatrix} 1.66 \\ 0.09 \end{bmatrix}$ (1.19)	$\begin{bmatrix} -1.86 \\ -0.10 \end{bmatrix}$ (1.50)	0.24	16.01*	3.20* (307)

* Statistically significant at the 0.05 level or better

Source: Census Report, 1881; White (1882); Wilson (1875).

Notes: 1) t-statistics are shown in parenthesis below the coefficients.

2) The raw coefficient is shown in square brackets above the dummy variables. This is expressed in units of percentage change in the dependent variable.

TABLE C.2 STANDARDIZED OLS STEPWISE REGRESSION COEFFICIENTS, SECOND MODEL

Dependent Variable	Independent Variables				R ²	F-statistic	F-statistic for combined effects of D1, D2, D3 (N)
	Pop71 Males	Crowd- ing71	Dist- ance	D1	D2	D3	
Scunthorpe Males	-0.00 (0.03)	-0.07 (1.77)	0.03 (0.84)	-0.44 (11.76)*(2.33)*(2.88)*(1.97)*	[-0.46] [-0.51] [-0.14] [-0.18] [-0.11]		2.81* (605)
Scunthorpe Females	0.02 (0.33)	0.01 (0.34)	0.01 (0.37)	-0.44 (11.87)*(2.33)*(2.22)*(1.59)	[-0.39] [-0.34] [-0.14] [-0.14] [-0.09]		2.02 (605)
Grantham Males	-0.05 (1.00)	-0.06 (1.52)	-0.04 (0.95)	-0.45 (12.11)*(0.46) (0.81) (0.24)	[0.09] [0.09] [0.05] [-0.02] [-0.01]		0.61 (605)
Grantham Females	-0.04 (0.84)	0.08 (2.01)*(0.23)	-0.01 (10.65)*(0.03) (0.24) (0.38)	[-0.01] [-0.04] [-0.00] [-0.02] [-0.05]			0.17 (605)

* Statistically significant at the 0.05 level or better

Source: C.E.Bs; Census Report, 1871; White (1882); Wilson (1875).

Notes: 1) t-statistics are shown in parenthesis below the coefficients.

2) The raw coefficient is shown in square brackets above the dummy variables. This is expressed in units of percentage change in the dependeht variable.

TABLE C.3 ZERO-ORDER CORRELATION MATRIX, FIRST MODEL

	<u>FD</u>	<u>Pop 71</u>	<u>Males 71</u>	<u>Crowding 71</u>
MD	0.38	-0.27	0.25	0.19
FD		-0.33	-0.29	0.15
Pop 71			-0.06	-0.23
Males 71				0.13

TABLE C.4 ZERO-ORDER CORRELATION MATRICES, SECOND MODELSCUNTHORPE DISTRICT

	<u>Migrant females</u>	<u>Pop 71</u>	<u>Males 71</u>	<u>Crowding 71</u>	<u>Distance</u>
Migrant males	0.80	0.02	-0.05	-0.01	-0.42
Migrant females		0.02	0.03	-0.02	-0.43
Pop 71			-0.12	-0.27	0.13
Males 71				0.17	-0.05
Crowding 71					-0.02

GRANTHAM SAMPLE

	<u>Migrant females</u>	<u>Pop 71</u>	<u>Males 71</u>	<u>Crowding 71</u>	<u>Distance</u>
Migrant males	0.51	-0.04	-0.07	-0.01	-0.45
Migrant females		-0.04	0.06	0.03	-0.40
Pop 71			-0.12	-0.27	-0.02
Males 71				0.17	0.04
Crowding 71					-0.01

missing information) as all could, potentially, have contributed to the migrant stream. Those that did not do so therefore have a dependent variable valued zero. The results are shown in Table C.2. The correlation matrices for each model are contained in Tables C.3 and C.4.

The models used have little explanatory power, accounting for between 15% and 24% of the variation in the dependent variable. Given the paucity of information available this is actually quite respectable. The models are more useful in allowing an assessment of the relative importance of those variables which have been included. The use of standardised coefficients (beta weights) allows direct comparison between the variables within each equation. However, the three dummies D1, D2 and D3 really represent one variable, so their beta weights are rather meaningless. For this reason the raw coefficients are shown in square brackets in the Table.

In the case of the first model (Table C.1), population size appears the most important influence. Smaller communities suffered the greatest proportionate losses of population in the 1870s. The sex ratio in 1871 was also of some influence: a shortage of females militated against further female loss but encouraged males to leave. The opposite tended to occur where there was a female surplus. Overcrowding was much less important, though still a (statistically) significant factor among males. No clear pattern emerges regarding the pattern of landownership, represented by the dummy variables. In the case of males, the raw coefficients show a nice gradation: very closed places experienced the least proportionate population decline. So, when population size is controlled for, it was the open parishes which suffered the worst losses. However, only one of the coefficients is statistically significant, and the overall impact of the dummies is insignificant. Turning to females, the overall impact of landownership was significant, but not any individual coefficient. Further, no consistent pattern is evident among the raw

coefficients. If anything, the closed villages seem to have lost more population than the open villages, in direct contradiction to the male situation. In sum, the picture is confused, and the poor significance of most of the coefficients disallows meaningful interpretation.

Overall, the model possessed a better goodness of fit for females than males. Perhaps the missing economic variables were less important in explaining female migration?

Omitting certain extreme values made virtually no difference to the structure of the two equations. The overall goodness of fit was reduced very slightly for males and marginally increased for females.

Turning to the second set of results (Table C.2), the great importance of propinquity is at once apparent. Distance was a major determinant of a community's contribution to a particular migrant stream. This is entirely expected. The population and crowding variables become insignificant in this second model, though it is not clear why. Perhaps these were important in determining the amount of local out-migration from any particular place, but not in determining the level of rural-urban movement? The sex ratio seems to work in the opposite direction to that in the first exercise, though only one coefficient (Grantham females) is statistically significant and another (Scunthorpe females) is totally without significance. The more males in 1871, the less the male migrants in the two destinations in 1881. The same holds for Grantham females. This suggests that urban destinations soaked up males (or females) from a particular location over more than one decade, though it is hard to square this with model one which points to sexual imbalances correcting themselves from census to census. Most striking, however, is the differing impact of landownership. The dummy variables only register any influence among the Scunthorpe data, where the general pattern

seems to be 'the more closed, the less the decline'. This accords with the male findings with the first model. The Grantham coefficients are all insignificant. Whether a place was open or closed had no effect on migration into the town. This marked difference between the two destinations is wholly unclear. It suggests that the function of landownership differed from region to region.

When extreme values were excluded, however, landownership became of negligible importance in the Scunthorpe data too. Distance became even more influential and the goodness of fit rose to about 25% for all the equations except Grantham males where it rose more slightly to 0.22.

This exercise serves to illustrate the limited efficacy of attempts to reduce migration to a definite model, at least at the local level. Those used here explain but a minor portion of the total variation and the results are inconsistent and defy systematic interpretation. Of course, it could be objected that the equations presented here are mis-specified. The absence of important variables has already been noted. In addition, many of the relationships contained are probably non-linear. This is certainly the case with the distance variable.⁶ Yet when non-linear transformations of the variables were added to the equations the overall goodness of fit was only marginally better. Moreover, one aim of the exercise was to establish the relative importance of the different factors, and this becomes problematic once variables are split into their linear and non-linear components because beta-weights are non-additive.⁷

APPENDIX D. OCCUPATIONAL GROUPINGS FOR SCUNTHORPE DISTRICT

A – DIRECTLY ENGAGED IN THE IRON INDUSTRY

1. Iron Master

2. Managerial/Clerical:

Accountant at iron works
 Clerk at iron mines
 Clerk at iron works
 Inspector of iron mine wagons
 Manager (lives at iron works site)
 Manager (with company named)
 Stocktaker at iron works
 Store manager at blast furnace

3. Furnace and other iron workers:

Blacksmith at iron works
 Blast engine driver
 Boiler fireman
 Boiler maker
 Boiler smith
 Engine cleaner
 Engine driver
 Engine driver -stationary
 Engine driver at iron works
 Engine fitter
 Engine shunter
 Engine wright
 Engineer
 Filler
 Fireman
 Fireman at furnace
 Fitter
 Fitter at iron works
 Fitter's labourer
 Foreman of iron works
 Furnace charger
 Furnace cleaner
 Furnace gas man
 Furnace keeper
 Furnace man
 Gasman
 Hoist engine driver
 Horse driver at iron works
 Iron moulder
 Joiner at iron works
 Labourer at North Lincolnshire Iron Co.
 Labourer at furnace

Loco. engine driver at iron works
 Nightwatchman at iron works
 Pattern maker
 Pig iron carrier
 Puddler at iron works
 Riveter
 Shunter at North Lincolnshire Iron Co.
 Shunter at furnace
 Slag breaker at iron works
 Smith's striker
 Weighman at iron works

4. 'Labourer at the iron works'

5. Iron mining:

Foreman of iron mines
 Iron miner and agricultural labourer
 Iron miner at North Lincolnshire Iron Works
 Ironstone labourer
 Ironstone miner
 Sandminer
 Shunter at iron mines

B – PERSONS ONLY POSSIBLY ENGAGED IN THE IRON INDUSTRY

1. Craftsmen, tradesmen, clerical workers and others:

Accountant
 Blacksmith
 Bricklayer
 Bricklayer's labourer
 Brickmaker
 Builder
 Carpenter
 Carpenter's labourer
 Clerk
 Coal Agent
 Coal dealer
 Coal merchant
 Contractor
 Joiner
 Slag merchant
 Tile maker
 Tin plate worker
 Toolmaker

2. Railway workers:

Engine driver -locomotive
 Platelayer
 Platelayer on railway
 Platelayer's labourer
 Railway engine cleaner
 Railway wagon builder
 Wagon builder

3. 'Labourer' (unspecified)C – PERSONS NOT ENGAGED IN THE IRON INDUSTRY1. Agriculture:

Agricultural labourer
 Cattle dealer
 Cottager
 Cowman
 Dairymaid
 Decoy manager
 Farm bailiff
 Farm boy
 Farm servant
 Farmer
 Farrier
 Gardener
 Horse dealer
 Mole catcher
 Rat catcher
 Seedsman
 Shepherd
 Waggoner

2. Trade/dealing:

Agent
 Baker
 Barmaid/man
 Beer seller
 Beerhouse keeper
 Brewer
 Butcher
 Carrier
 Carter
 Chemist
 Chimney sweep
 Confectioner

Draper
 Draper's assistant
 Drayman
 General dealer
 Greengrocer
 Grocer
 Grocer's assistant
 Hairdresser
 Hawker
 Innkeeper
 Insurance broker
 Iron monger
 Laundress
 Lodging house keeper
 Merchant's clerk
 Miller
 News agent
 Postmaster
 Publican
 Shoe dealer
 Shopkeeper
 Shopman
 Timber merchant
 Washerwoman
 Wine and spirit merchant

3. Crafts:

Bootmaker
 Cordwainer
 Dressmaker
 Milliner
 Painter
 Painter and glazier
 Plumber and glazier
 Rope maker
 Seamstress
 Shoemaker
 Tailor
 Tailor's assistant
 Twine spinner
 Watchmaker
 Wheelwright

4. Medical/education/clergy:

General practitioner
 Governess
 Minister
 Music teacher
 Primitive Methodist minister
 School teacher/master/mistress/
 Vicar/curate/rector

5. Servants:

Charwoman
Domestic servant
Gamekeeper
General servant
Groom
Housekeeper
Nurse
Nursemaid

6. Railway workers:

Railway clerk
Railway foreman
Railway inspector
Railway labourer
Railway pointsman
Railway porter
Railway servant
Railway signalman
Railway station master

7. Other:

Apprentice
Asphalt labourer
Errand boy
Jobbing labourer
Labourer on roads
Messenger
Police constable
Police sergeant
Porter
Postman
Ship's blacksmith

APPENDIX E. OCCUPATIONAL STRUCTURE OF THE NORTH LINCOLNSHIRE IRON INDUSTRY

The allocation of individual occupational titles to the different classes within the iron industry is shown here. Only those titles which can be positively identified as belonging to the industry have been included, that is group A in Table 5.3 in Chapter 5.

Managerial/Clerical

Accountant at iron works
Clerk at iron mines
Clerk at iron works
Inspector of iron mine wagons
Manager (lives at iron works site)
Manager (with company named)
Stocktaker at iron works
Store manager at blast furnace

'Higher' manual iron workers

Blacksmith at iron works
Blast engine driver
Boiler maker
Boiler smith
Engine driver
Engine driver -stationary
Engine driver at iron works
Engine fitter
Engine shunter
Engine wright
Engineer
Filler
Fitter
Fitter at iron works
Foreman of iron mines
Foreman of iron works
Furnace charger
Furnace gasman
Furnace keeper
Furnace man
Gasman
Hoist engine driver
Iron moulder
Joiner at iron works
Locomotive engine driver at iron works

Pattern maker
 Puddler at iron works
 Riveter
 Smith's striker
 Weighman at iron works

Note: the title 'Foreman of iron mines' is included here because although not an employee in the works, the job did require some experience and implies the possession of some status

'Lower' manual iron workers

Boiler fireman
 Engine cleaner
 Fireman
 Fitter's labourer
 Furnace cleaner
 Horse driver at iron works
 Labourer at North Lincolnshire Iron Works
 Labourer at furnace
 Labourer at iron works
 Nightwatchman at iron works
 Pig iron carrier
 Shunter at North Lincolnshire Iron and Smelting Company
 Shunter at furnace
 Slag breaker at iron works

Iron miners

Iron miner and agricultural labourer
 Iron miner at North Lincolnshire Iron Works
 Ironstone labourer
 Ironstone miner
 Sandminer
 Shunter at iron mines

Notes to Chapter 1

1. Though by the second half of the nineteenth century most towns were growing more by natural increase than net migration. However, a high level of natural increase was itself partly the result of a high level of migration among people of child-rearing ages.
2. See, for example, the brief survey provided in Hunt (1981), pp.144-57.
3. White and Woods (1980), p.4.
4. Hagerstrand (1957), p.27.
5. De Jong and Gardner (1981), pp.1-5.
6. J.A. Jackson (1969), pp.64-5; White and Woods (1980), pp.12-18.
7. See, for example, W.A. Armstrong (1981a); Banks (1973); B. Collins (1976); Devine (1979); Devine (1983); Devine (1984); Horn (1972); Samuel (1973).
8. Constant (1948); Peel (1942); Perry (1969).
9. W.A. Armstrong (1981b); Cairncross (1953); Carrier and Jeffery (1953); Friedlander (1970); Friedlander and Roshier (1965-6); Gray (1983); Law (1967); Lawton (1958); Lawton (1968); Lawton (1973); Lawton (1978b); Lawton (1983); Newton and Jeffery (1953); Redford (1926); Saville (1957).
10. Baines (1972) and Baines, forthcoming.
11. Grigg (1977).
12. Greenwood and Thomas (1973); Vedder and Cooper (1974). See also Hunt (1973).
13. Friedlander (1983).
14. See Lawton (1978a) and Wrigley (1972) for guides to the potential use of the manuscript census.
15. The most important works to date include Anderson (1971); Anderson (1974); Anderson (1985); W.A. Armstrong (1974); Balmer (1979); Brayshay (1980); Bryant (1971); Carter and Wheatley (1982); B.Collins (1979); B. Collins (1981); Cromar (1980); Dennis (1977); Finnegan (1982); Grundy (1982); Hopkinson (1981); J.T. Jackson (1982); Lawton (1955); Lees (1979); Maude (1975); O'Tuathaigh (1981); Pooley (1977); Pooley (1979); Pooley (1983); Pryce (1979); Robin (1980); C. Thomas (1971); Wheatley (1983); Williams (1980). For a detailed bibliography of works on British migration using the census books see Pearce and Mills (1982).
16. Anderson (1971).
17. B. Collins (1979); B. Collins (1981); Lees (1979), ch.5.
18. Pooley (1977) and Pooley (1983) deal with the Scots and the Welsh.
19. Grundy (1982); J.T. Jackson (1982).

20. Anderson (1971); W.A. Armstrong (1974).
21. Blumin (1969); Griffen (1969), pp.56-7; Katz (1975), ch.3; Katz, Doucet and Stern (1982), ch.3; Knights (1969), pp.261-4; Thernstrom (1964), pp.84-90; Thernstrom (1973), pp.15-21.
22. Dennis (1977); Pooley (1979); Pritchard (1976). For a review of work in this field see Dennis (1984), ch.8.
23. Pooley (1977).
24. Anderson (1985); B. Collins (1979); B. Collins (1981); Grundy (1982), ch.7; Maude (1975), pp.356-7.
25. B. Collins (1979), ch.6; Grundy (1982), ch.5.
26. Erikson and Rogers (1978), pp.48-51, 181-3; Kalvemmark (1979); Hagerstrand (1957).
27. Anderson (1971); Anderson (1974); W.A. Armstrong (1974); Cromar (1980); Dennis (1977); Maude (1975); Pooley (1977); Pooley (1979); Pooley (1983); Williams (1980).
28. For a comprehensive bibliography of the multitude of local studies see Pearce and Mills (1982). Mills (1984) attempts to collate the information from a selection of such studies.
29. Bryant (1971); Robin (1980).
30. An example is Hopkinson's study of Bedford. Hopkinson (1981).
31. But see B. Collins (1979) and B. Collins (1981).
32. See White and Woods (1980), pp.12-18 for a good survey of the different ways in which migration is selective.
33. Hunt (1973), ch.7.
34. See the contributions to De Jong and Gardner (1981).
35. See the discussion at the beginning of Chapter 9 below.
36. Most existing studies of migration focus on destinations which attracted a lot of migrants from rural industrial areas. This is illustrated in a paper I am presently preparing for publication.

Notes to Chapter 2

1. White and Woods (1980), pp.5-6. For a comprehensive survey of nineteenth century demographic materials see Lawton (1982).
2. Oral history methods could only capture a later period.
3. J.A. Jackson (1969), p.4.
4. The conventions used in this project are those laid down in the contributions to Wrigley (1972) and Lawton (1978a).
5. White (1882). An entry in this directory was taken to denote self-employed or employer status.
6. For a full description of this district see Chapter 5. It is worth noting that this figure does not tally exactly with that given in the published census. As these totals were checked it would seem that the mistakes originated from Somerset House or a preceding stage of the enumeration. In the case of Scunthorpe township, for example, one household seems to have been enumerated twice. The comparisons are:

<u>Township</u>	<u>1881 published census</u>	<u>Actual counted</u>
Ashby	1462	1462
Brumby (Old)	203	168
Frodingham	1663	1662
Scunthorpe	<u>2126</u>	<u>2040</u>
	5454	5332

Sources: Census Report, 1881; C.E.Bs.

The large discrepancies in the cases of Scunthorpe and Old Brumby townships are almost wholly due to the inclusion in the published census figures of areas excluded from this analysis. In the case of Old Brumby, the published figure includes outlying houses contained in another enumerator's book, that for Burringham, a neighbouring village. On examination of a contemporary OS map it was found that these households were for the most part indeed nearer to Burringham. White's Directory of 1882, while listing some of these persons under Brumby, excluded them from the population total for the village itself. Hence they were excluded from the analysis. Similarly, the published Scunthorpe total includes a portion of the neighbouring small hamlet of Gunness or Gunhouse which lay mainly in West Halton parish. Hence it, too, was excluded.

7. This unit was chosen as that most coextensive with the built-up urban area of the town. For its geography, see chapter 7. The sampling procedure followed was that described in Schofield (1972).
8. The published census gives the total population of the Municipal Borough at 16886, but 23 of the 47 Workhouse inmates were deducted to adjust for the wider catchment area of the Poor Law Union. Hence

the revised total population figure of 16863. This is explained more fully in the next paragraph.

9. Robinson, Anderson, Cohen et al (1980).
10. Anderson (1972a).
11. The analysis of neighbouring in Chapter 9 uses this facility.
12. Nie, et al (1970).
13. W.A. Armstrong (1974), pp.203-5; Blalock (1972), pp.275-87. The 'expected values' were the population totals reduced by the sampling fraction of one-third.
14. $\chi^2 = 16.32$, 10 degrees of freedom (distribution has 11 age groups of either sex, giving 11 rows and two columns).
15. Allen (1966), pp.162-3; Schofield (1972), pp.156-61.
16. Note that the assumption of normality in the sampling distribution, upon which this test is based, breaks down if nP is less than 20, where n is the sample size and P the proportion of the population with the attribute. (For such small proportions the Poisson distribution is more appropriate). Hence certain categories do not bear further reduction. For example, those aged 85 and over are too few in number and have been combined with those in the preceding cohort. Thus any results obtained for the 85s and over must be treated with extreme caution. See W.A. Armstrong (1966), p.276.
17. A comprehensive exercise in nominal record linkage was beyond the scope of this project. While the tracing of the persistent between censuses is a manageable task, locating migrants in their previous locations is extremely time consuming. Moreover, migrants can often only be traced through information given in the base census, causing the resulting data set of traced individuals to be very unrepresentative. (This problem is discussed later in the present chapter). For record linkage in historical research see Morris (1976); Wrigley (1973).
18. Anderson (1972a), pp.71-4.
19. Some indication of the rate of success of the exercise can be given from the 'general search' results outlined above. For consistency analysis must be restricted to those whose 'pointers' all fell within the search area of four counties. 450 such migrants were looked for in their previous location in the 1871 census. (Including one of the other townships within the Scunthorpe study district). 190 of these were successfully found, a rate of 42.2%. As expected, the rate among males whose only 'pointer' was their own birthplace was rather less successful at 32.1% ($N=137$).

Notes to Chapter 3

1. LAO Winn 1/8.
2. See, for example, Graham (1892).
3. LAO Winn 5/3.
4. Saville (1957).
5. Lawton (1968); Lawton (1973); Lawton (1983); Redford (1926), chs.1 and 4; Saville (1957), ch.2. The period 1850-1914 may well have seen more population mobility than did preceding or succeeding periods: Hunt (1973), pp.251-65; Hunt (1981), pp.146-7.
6. In 1861, for example, Lincolnshire had the highest proportion of its population in agriculture (32.3%) of all English counties except Rutland. Greenwood and Thomas (1973), p.101.
7. For the development of the major towns in Lincolnshire in this period see Aspinall (1976); M.E. Armstrong (1981a); Baker (1953); Beckwith (1967); Beckwith (1968); Beckwith (1970); Dickenson (1969); G.J. Fuller (1954); Gillett (1970), chs. 14-18; Hill (1974); Olney (1979), pp.169-70; Wright (1982), ch.10.
8. On market towns see Birkbeck (1976); N.C. Birch (1972); Couth (1975); Elliott (1968); Elliott (1972); Ellis (1982); Goulding (1956); Gurnham (1984); Market Rasen W.E.A. (1971); Obelkevich (1976), pp.4-5; Olney (1979), pp.68-70; Wright (1973).
9. Baines (1972).
10. Carrier and Jeffery (1953), p.22; Grigg (1980), p.186.
11. Grigg (1977), p.49
12. This is illustrated by the fact that in 1891 31.5% of Grimsby's population was born outside Lincolnshire, whereas only 17.1% of the total county population was born outside the county. The corresponding figures for 1901 were 30.4% and 18.7% respectively. (Figures are not available for Grimsby in earlier published censuses).
13. These were identified from the map in Wright (1982), p.5.
14. Lawton (1984), p.184. The highest quinquennial growth, however, was in 1821-6. Wrigley and Schofield (1981), p.213.
15. In the case of two population peaks of equal magnitude, the later peak was used.
16. It has been possible to correct this distortion in some parishes where the published census footnotes state the exact number of navvies enumerated.
17. Orwin and Whetham (1964), p.317.

18. Lawton (1973), pp.206-8; Bunce (1970).
19. Ravenstein, quoted in Grigg (1977), p.42.
20. A detailed examination of migration exchanges between some Swedish parishes in this century reached similar conclusions. Hagerstrand (1957), pp. 30-60.
21. Hunt (1973), p.283, citing the 1851 Census Report; Hunt (1981), pp.153-4
22. See also Bryant (1971), pp.128, 131.
23. Souden (1984a), pp.149-68.
24. Samuel (1975).
25. Ebery and Preston (1976), p.77.
26. Higgs (1979), pp.115, 235
27. Chartres and Turnbull (1981); Horn (1984), ch.5.
28. Only a huge study of the manuscript census for every rural community in every available year would solve this problem.
29. Lawton (1973), p.215; Mingay (1977), pp.182-3; Olney (1979), pp.62-5; Saville (1957), pp.20-30; LAO Winn 2/31; LAO Winn 3/6.
30. Baines (1981), p.156; Grigg (1980), p.185.
31. Horn (1982), p.29; Mills (1984), pp.iii, 2.
32. Mills (1984), p.5; Robin (1980), p.186.
33. Horn (1982), p.26.
34. In terms of the relative mobility levels among farmers and labourers the evidence is ambiguous. Olney found more farmers were natives of Binbrook parish in 1851 than were farm workers, but a recent collection of local studies finds the opposite situation. Olney (1975), p.18; Mills (1984), p.iii. It seems likely, however, that agricultural labourers were more mobile than farmers, given the probably greater participation of the former class in rural depopulation.
35. S.B.L. Druce, *Second Report on Lincolnshire to the Royal Commission on the Depressed State of the Agricultural Interests*, PP 1882 XV, p.54; *Royal Commission on the Depressed State of the Agricultural Interests*, PP 1881 XV, p.243 (evidence of J. Martin) and PP 1881 XVII, p.150 (evidence of M. Heanley); *Royal Commission on Agricultural Depression*, PP 1894 XVI Part 1, p.27 (evidence of W.L. Huskisson); R. Hunter Pringle, *Report on the Isle of Axholme to the Royal Commission on Agricultural Depression*, PP 1894 XVI Part 1, p.24; A. Wilson Fox, *Report on the County of Lincolnshire (excepting the Isle of Axholme) to the Royal Commission on Agricultural Depression*, PP 1895 XVI, pp.87, 90-2; E. Wilkinson, *Report on the Poor Law Union of Louth. Royal Commission on Labour. The Agricultural Labourer*, PP 1893-4 XXXV, p.42.

36. Hunt (1967), p.281.
37. Druce, *Second Report*, p.56; and see Graham (1892), p.26 and Winn (1950), p.234.
38. W.A. Armstrong (1981c), pp.501-2.
39. *Grantham Journal*, 21 May 1881; Haresign (1980), p.430; Wilson Fox, *Report on the County of Lincolnshire*, p.91. This point is made at a national level by O' Grada (1981), p.191.

Notes to Chapter 4

1. Greenwood and Thomas (1973), p.91.
2. Ibid, p.92.
3. Lawton (1973), p.218. Such an emphasis seems apparent, too, in Saville (1957), pp.8-20
4. Hunt (1981), p.148.
5. Haresign (1980), pp.25, 441-8; E.L. Jones (1964).
6. Cairncross (1953), p.75.
7. The following discussion relies heavily on Beastall (1978); Brown (1978); Grigg (1966); Haresign (1980) and Thirsk (1957). For a survey of economic developments in Victorian agriculture see Thompson (1981).
8. Beastall (1978), chs. 8 and 9; Grigg (1962); Grigg (1966); Perkins (1975a); Perkins (1976); Rogers (1970), pp.63-7.
9. Brown (1978), pp.8-10; S.B.L. Druce, Second Report ... on Lincolnshire. Royal Commission on the Depressed Condition of the Agricultural Interest, PP 1882 XV, p.1; Royal Commission on the Depressed Condition of the Agricultural Interests, Volume Three, PP 1881 XVII, p.1 (evidence of S.B.L. Druce); Thirsk (1957), pp.305-308.
10. Beastall (1978), p.146.
11. Quoted in Brown (1978), p.94. For similar testimony see F.D. Longe, Report on Agricultural Gangs in the Counties of Lincolnshire, Northamptonshire, etc. Sixth Report of the Royal Commission on the Employment of Children in Trade and Industry, PP 1867 XVI, p.37; E Stanhope, Report on the Counties of Lincolnshire etc, First Report of the Royal Commission on the Employment of Children, Young Persons and Women in Agriculture, PP 1867-8 XVII, p.73; Royal Commission on the Depressed Condition of the Agricultural Interests, Volume One, PP 1881 XV, p.237 (evidence of J. Martin).
12. F.D. Longe, Report on Agricultural Gangs; E. Stanhope, Report on ... Lincolnshire, p.73; E. Wilkinson, Report on the Poor Law Union of Holbeach. Royal Commission on Labour. The Agricultural Labourer, PP 1893-4 XXXV, p.108.
13. Stovin (1982), p.62. See also Jones (1964), pp.335-7
14. Royal Commission on Agricultural ... Interests. Volume Three PP 1881 XVII, pp.6, 35 (evidence of S.B.L. Druce); Royal Commission on Agricultural Depression, Volume Four, PP 1896 XVII, p.110 (evidence of A. Wilson Fox)
15. A. Wilson Fox, Report on the County of Lincolnshire. Royal Commission on Agricultural Depression, PP 1895 XVI, p.35.
16. Brown (1978), pp.20-42; Thirsk (1957), pp.310-11.

17. Brown (1978), pp.110-164; Royal Commission on Agricultural Depression, Volume Four, PP 1896 XVII, p.111 (evidence of A. Wilson Fox)
18. Brown (1978), pp.179-187.
19. Beastall (1978), ch.1; Brown (1978), pp.5-8. On the Fens, see G.J. Fuller (1957).
20. Brown (1978), pp.179-191; R. Hunter Pringle, Report on the Isle of Axholme etc. Royal Commission on Agricultural Depression, PP 1894 XVI, Pt.1, p.15; Thirsk (1957), p.317.
21. Brown (1978), pp.192-7; Thirsk (1957), p.317; See Perkins (1977a) on sheep farming in the county.
22. Thirsk (1957), pp.311-12.
23. Druce, Second Report, p.60; Thirsk (1957), p.320.
24. The number of cattle increased about 50% on the claylands, 1870-1910, mainly on land previously used for growing wheat. Thirsk (1957), pp.320-21.
25. Bunce (1970) similarly found geographical variation in the impact of depression to be largely unrelated to the spatial pattern of rural population change.
26. Beastall (1978), pp.4-5, 7-9, ch.4; S.B.L.Druce, Report on Lincolnshire. Royal Commission on the Depressed Condition of the Agricultural Interests, PP 1881 XVI, pp.385-6; Druce, Second Report pp.5, 52; Haresign (1980), pp.13-14, 22-24, 41-45; Hunter Pringle, Report on the Isle of Axholme, pp.5, 7, 260; Obelkevich (1976), pp.17, 48; Rogers (1970), pp.57-62; Royal Commission on ... Agricultural Interests, Volume Three, p.8 (evidence of S.B.L. Druce); Royal commission on Agricultural Depression, Volume Four, p.108 (evidence of A. Wilson Fox); Stanhope, Report on Lincolnshire, pp.72-4; Thirsk (1957), pp.113, 220, 230-236.
27. Druce, Report on Lincolnshire, p.391.
28. Royal Commission on ... Agricultural Interests, Volume One, p.237 (evidence of J. Martin).
29. Hunter Pringle, Report on the Isle of Axholme, pp.10-12; Royal Commission on Agricultural Interests, Volume Three, p.2 (evidence of S.B.L. Druce; Royal Commission on Agricultural Depression, Volume One, PP 1894 XVI Pt.1, p.257 (evidence of R. Hunter Pringle). It seems to me that writers such as Haresign and Thirsk exaggerate the 'revival' of many small farmers in the late 1880s and the 1890s. The weight of contemporary comment is pessimistic. Haresign (1983), p.29; Thirsk (1957), pp.311-12.
30. Wilson Fox, Report on the County of Lincolnshire, p.59.
31. Ibid, p.68.
32. Ibid, p.78.

33. Druce, Second Report, p.3; Royal Commission on ... Agricultural Interests, Volume One, p.237 (evidence of J. Martin); Royal Commission on ... Agricultural Interests, Volume Three, pp. 1, 148, 896 (evidence of S.B.L. Druce, M. Heanley and J.B. Stanhope).
34. E. Wilkinson, Report on the Poor Law Union of Louth. Royal Commission on Labour. The Agricultural Labourer, PP 1893-4 XXXV, p.46; Hunter Pringle, Report on the Isle of Axholme, p.13.
35. W.A. Armstrong (1981c), pp.497-50; Mingay (1981), p.6.
36. Grantham Journal, 21 May 1881. Wilkinson, Report on the Poor Law Union of Louth, p.42; Board of Agriculture and Fisheries, Report on the Decline in the Agricultural Population of Great Britain, 1881-1906, PP 1906 XCVI, pp.10, 11, 33-4, 101.
37. W.A. Armstrong (1981b), pp.72-4.
38. Brown (1978), pp.96-7; Druce, Second Report, p.54; Wilkinson, Report on the Poor Law Union of Louth, p.42; Wilson Fox, Report on the County of Lincolnshire, p.85.
39. Haresign (1980), p.406; Wilkinson, Report on the Poor Law Union of Holbeach, p.107. It seems to me that Haresign probably exaggerates the extent of unemployment among agricultural labourers, even in the late 1870s. Haresign (1983), p.29.
40. LAO Winn 5/5.
41. Beastall (1978), ch.10; Brown (1978), p.197; Grigg (1966), pp.190-193; Haresign (1980), pp.173-77; Report on the Decline of the Agricultural Population, pp.33-4; Royal Commission on ... Agricultural Interests, Volume One, p.24 (evidence of J. Martin); Victoria County History (1906), p.405; LAO Winn 5/5; LAO Winn 5/7. The upland part of the county also saw early implementation of improvements in hand tool technology, namely the replacement of sickles by scythes. Perkins (1976-7).
42. Druce, Report on Lincolnshire, p.388; White (1882), passim.
43. W.A. Armstrong (1981a), p.80; W.A. Armstrong (1981b), pp.120-121; Jones (1964), p.333.
44. Stovin (1982), pp.73-4, and see also p.34 for a similar comment.
45. Wilson Fox, Report on the County of Lincolnshire, p.91. See also H.J. Hunter, Inquiry on the State of the Dwellings of Rural Labourers. Seventh Report of the Medical Officer of the Privy Council, 1864, PP 1865 XXVI, p.230. It must be remembered, however, that farm machinery and the improvements in hand technology earlier in the nineteenth century were connected mainly with harvesting. Scythes and bagging hooks and self-binding reapers were all harvest tools. They therefore tended to displace seasonal rather than "ordinary" farm labour. See W.A. Armstrong (1981a), p.80; E.J.T. Collins (1969a), pp.469-472; E.J.T. Collins (1969b); Perkins (1976-7); Perkins (1977-8).
46. E.J.T. Collins (1972), pp.19-20, 28-9.

47. For example Lawton (1968), p.60.
48. Thompson (1981), p.110.
49. W.A. Armstrong (1981b), p.131-2; Graham (1892), pp.114-25; Haresign (1980), ch.10; Haresign (1983); Horn (1984), pp.108-111; Mingay (1977), pp.104-5; Orwin and Whetham (1964), pp.330-5; Perkins (1983); **Report on the Decline in the Agricultural Population**, p.64; Wilkinson, **Report on the Poor Law Union of Holbeach**, pp.110-11; Wilson Fox, **Report on the County of Lincolnshire**, *passim*.
50. Contrast this with Winn (1950), p.234. Farm size was held to have increased in the later decades of the century: **Report on the Decline in the Agricultural Population**, pp.33-4.
51. In a sample of some south Lindsey villages in the 1851 census, Obelkevich found that while less than 25% of farmers occupied 200 acres or more, they employed nearly 75% of the agricultural labourers. Obelkevich (1976), pp.47-8.
52. Wilkinson, **Report on the Poor Law Union of Louth**, pp.42-3.
53. W.A. Armstrong (1981b), pp.122-3; Lawton (1973), p.217.
54. Perkins (1975b).
55. Graham (1892), p.94.
56. Hunter, **Dwellings of Rural Labourers**, pp.126, 223, 227 and *passim*.
57. Druce, **Second Report**, p.55; **Royal Commission on ... Agricultural Interests, Volume One**, p.238 (evidence of J. Martin); Perkins (1975b); Wilkinson, **Report on the Poor Law Union of Louth**, p.45. See also Perkins (1977b) on the declining provision of rural Poor Law housing from the 1830s.
58. Beastall (1978), pp.113-17; Everitt (1972); H.A. Fuller (1974), pp.141-3; Holderness (1972a); Mills (1959); Mills (1980), chs. 1, 4 and 6; Obelkevich (1976), pp.10-14; Olney (1979), pp.72-80; Sheppard (1961); LAO Winn 5/3. For specific examples of open and closed parishes in Lincolnshire see Hunter, **Dwellings of Rural Labourers**, pp.224-9 and Stanhope, **Report on Lincolnshire (accompanying evidence)**, p.298.
59. Hunter, **Dwellings of Rural Labourers**, p.135.
60. H.A. Fuller (1974), pp.143-5; Obelkevich (1976), p.4; Olney (1975); Olney (1979), pp.22-3, 27, 39; Wilkinson, **Report on the Poor Law Union of Louth**, p.44.
61. Mills (1980), p.81; Obelkevich (1976), pp.12-13.
62. Olney (1979), pp.75-8. 'Open' parishes appear to have had a higher bastardy rate than closed parishes. Couth (1980), pp.170-204.
63. Religious dissent, for example, flourished more favourably in 'open' than in 'closed' parishes. Ambler (1979), pp.lxv-lxxiv; Everitt (1972); Obelkevich (1976), p.13.

64. Wilkinson, Report on the Poor Law Union of Louth, passim; H.A. Fuller (1974), p.146.

65. The categorisation of communities into 'open' and 'closed' types is necessarily subjective given the impressionistic evidence which must be used. Two sources were used here: J.Wilson's Imperial Gazetteer (1875) and William White's county directory of 1882. Both works contain statements on property-holding in rural communities, though the coverage is variable both in extent and perspicuity. The schema used was as follows:

'More Closed'	-	all the property (except the glebe) owned in one estate
'Less Closed'	-	several owners listed, but no more than four; or one owner 'owns most of the soil'
'Less Open'	-	between five and nine named owners (excluding the church), where listed. Where none listed, reference to the property being 'subdivided' (Wilson) or to the presence of 'a few smaller owners' (White) or similar
'More Open'	-	ten or more named owners (excluding the church), where listed. Where none listed, reference to 'a great many small freeholders' or 'many small owners' (White), or to the property being 'much subdivided' (Wilson)

For similar exercises based on these sources see Ambler (1979), pp.lxv-lxxiv and Everitt (1972).

66. Stanhope, Report on ... Lincolnshire, pp.72-3.

67. Haresign (1980), p.51.

68. Olney (1975), p.18; Olney (1979), p.78. Gaunt's Swedish study found that 'manor' (closed) parishes attracted more immigrants than did 'freehold' (open) parishes. Gaunt (1978), p.82.

69. Marshall and Walton (1981), p.74.

70. W.A. Armstrong (1981b), pp.121-2; Hunt (1973), ch.7; Lawton (1973), pp.215-217. For rural poverty see Mann (1905).

71. An exception, however, is Graham (1892), pp.19, 203.

72. E. Wilkinson, Report on the Poor Law Union of Easingwold. Royal Commission on Labour. The Agricultural Labourer, PP 1893-4 XXXV, p.68.

73. Royal Commission on Agricultural Depression, Volume One, p.27 (evidence of W.L. Huskisson).

74. Wilkinson, Report on the Poor Law Union of Louth, p.42.

75. Wilkinson, Report on the Poor Law Union of Holbeach, p.107.
76. Kebbel (1887), p.81. See also the Report on the Decline in the Agricultural Population, pp.33-4 and Wilkinson, Report on the Poor Law Union of Louth, p.43.
77. LAO Winn 5/5. See also Graham (1892), ch.7.
78. Wilkinson, Report on the Poor Law Union of Louth, p.42.
79. Ibid, pp.42, 43.
80. Royal Commission on ... Agricultural Interests, Volume Three, p.150 (evidence of M. Heanley); Wilkinson, Report on the Poor Law Union of Louth, p.42; Wilson Fox, Report on the County of Lincolnshire, p.91.
81. The Epworth Bells, 13 November 1875.
82. Hunt (1973), pp.274-6; Hunt (1981), pp.154-5; Mingay (1977), pp.98-9, 106. Studies of pre-industrial England and of Holland in the later nineteenth century point to a high level of mobility among farm workers. Souden (1981), p.254; Samson (1973), p.82.
83. For a similar recent interpretation for lowland Scotland in this period see Devine (1984), especially pp.251-3.
84. Jefferies (1966), p.101.
85. Jefferies (1966); Obelkevich (1976), ch.2; Olney (1979), pp.91-5; LAO Winn 3/6.
86. Dunbabin (1963); Dunbabin (1968); Dunbabin (1974), ch.4; Horn (1976), pp.126-43; Horn (1984), pp.112-21; Olney (1979), pp.86-91; Russell (1956); Scotland (1975).
87. Beastall (1978), p.128; Obelkevich (1976), pp.76-7; Olney (1979), pp.83-6.
88. E.L. Jones (1964).
89. Olney (1979), p.87.
90. For example, Hunt (1981), pp.154-5 and Mingay (1977), pp.98-9, 106.
91. Russell (1956), passim.
92. Stamford Mercury, 10 April 1874 (quoted in Russell (1956), p.58).
93. This aspect of the movement has received little systematic attention. The only exception is Horn (1972), which focuses almost wholly on the N.A.L.U. and neglects Lincolnshire.
94. This is based upon existent copies of The Labour League Examiner and its successor The Labourer. See also Beastall (1978), p.233; Russell (1956), p.83; Scotland (1975), pp.7-8.
95. For example, The Grantham Journal, 7 May 1881. See also Russell (1956), p.163 and Scotland (1975), p.355.

96. Baines estimates that most (67%) emigrants came from towns and cities between 1861 and 1900, and that only 20% of these emigrants had been born in the countryside. Baines (forthcoming), ch.9, Table 9.5. Armstrong states farm labourers to have been under-represented among those emigrating abroad. W.A. Armstrong (1981a), p.74.
97. Russell (1956), p.83; *Labour League Examiner*, 15 August 1874, 5 September 1874, 26 September 1874.
98. *Stamford Mercury*, 16 April 1875 (quoted in Russell (1956), p.83).
99. *The Epworth Bells*, 27 November 1875.
100. *Labour League Examiner*, 15 August 1874.
101. Horn (1984), pp.186-204; Olney (1979), pp.155-9. The introduction of elected parish councils in 1894 can also be cited in this context. See Olney (1979), p.142.
102. LAO Winn 1/8.
103. Olney (1979), p.103.
104. Druce, *Second Report*, p.61. see also W.A. Armstrong (1981b), p.122.
105. Winn (1950), pp.234-5.
106. Kebbel (1887), pp.79-80.
107. Graham (1892), pp.33-5.
108. *Ibid*, p.35.
109. Bagwell (1981). Perry (1969) has used marriage distance data from 27 Dorset parishes to pinpoint a sudden fall in rural isolation in the 1880s, with little change in the preceding half-century. The figures on rural-urban migration discussed in Chapter 3 of the present study suggest a more gradual process throughout the second half of the nineteenth century.
110. Peacock (1969); Wright (1982), ch.5 and pp.179-80, 185-9, 198-9.
111. W.A. Armstrong (1981b), p.125; Hunt (1973), pp.266-73.
112. Cairncross (1953), p.75.
113. Childs (1932-4); Steel (1979), pp.172-4; LAO Winn 3/5.
114. Stovin (1982), *passim*.
115. Constant (1948), p.82. See also Peel (1942), p.27 for a similar phenomenon.
116. Bagwell (1981), pp.34-5; Everitt (1973), pp.217-18; Wright (1982), pp.201-2; Childs (1932-4); Steel (1979), p.174. See also Perry (1969), p.134 for bicycles in Dorset.

117. E.J.T. Collins (1976); Morgan (1975).
118. E.J.T. Collins (1976), p.49; Dover (1970), p.34; Gee (1890); Haresign (1980), pp.395-6; Wilson Fox, Report on the County of Lincolnshire, p.84; Wilson Fox, Report on the Wages and Earnings of Agricultural Labourers in Great Britain, PP LXXXII, pp.104-5; Wilkinson, Report on the Poor Law Union of Louth, p.42; Wilkinson, Report on the Poor Law Union of Holbeach, p.107.
119. Wilkinson, Report on the Poor Law Union of Holbeach, p.107. Seasonal migrants from English towns became more important than the Irish in the later nineteenth century. E.J.T. Collins (1976), p.51.
120. E.J.T. Collins (1976), p.41.
121. Dickinson (1971).
122. Beastall (1978), pp.123-5; Longe, Report on Agricultural Gangs; Olney (1979), p.82; Stanhope, Report on Lincolnshire; Thirsk (1957), pp.217-19, 269-70; Wilkinson, Report on the Poor law Union of Holbeach, p.108; Wilson Fox, Report on the County of Lincolnshire, p.85.
123. Longe, Report on Agricultural Gangs, pp.15-36.
124. Beastall (1978), p.125; Stanhope, Report on ... Lincolnshire, p.298 (evidence accompanying Report).
125. Stanhope, Report on ... Lincolnshire, p.284. For similar testimony see Hunter, Dwellings of Rural Labourers, pp.224-6, 229.
126. Rose (1976), pp.35-7.
127. Snell (1981), pp.411, 412 (information on 'total examinations').
128. The table is based upon information in those Removal Orders available in Lincolnshire Archives Office in July 1983. For subsequent additions to this holding, see the Annual Reports of the Lincolnshire Archives Office.
129. Kussmaul (1981b); Obelkevich (1976), p.69; Olney (1979), pp.78-80; Royal Commission on Agricultural Interests, Volume One, p.54; Wilson Fox, Report on the County of Lincolnshire, p.84; Wilson Fox, Report on the Wages and Earnings of Agricultural Labourers, p.16
130. Gray (1983), pp. 108-10; Kussmaul (1981a); Kussmaul (1981b), ch.4.
131. Stanhope, Report on Lincolnshire, p.287 (evidence accompanying Report, evidence of R. Winn).
132. Obelkevich (1976), p.67.
133. Kussmaul (1981a); Kussmaul (1981b), pp.63-7.
134. Wilson Fox, Report on the Wages and Earnings of Agricultural Labourers, p.16. The high incidence of farm service in Lincolnshire can be seen in the number of 'outdoor' labourers per 'indoor' labourers in 1871: 4.3 compared with 103.3 in Norfolk, 194.5 in Suffolk, 440.0 in Essex, 30.7 in Northamptonshire and 5.5 in pastoral Leicestershire. Dunbabin (1968),

p.123.

135. Grigg (1980), p.174. However, Hunt sees farm servants as more mobile than day labourers. Hunt (1981), pp.156-7. The situation is complicated by the fact that these were not rigid categories: most farm servants were young and became day labourers when older.
136. Morley (1934-6), p.122; Obelkevich (1976), pp.57-61; Spowat (1938), p.26; LAO Winn 3/5.
137. Gee (1893); LAO Winn 3/5.
138. Stanhope, *Report on Lincolnshire*, p.283 (accompanying evidence). See also Obelkevich (1976), p.82
139. Fenton (1978), p.21; Gee (1893); Haresign (1980), p.392; Wilkinson, *Report on the Poor Law Union of Holbeach*, p.107; Wilson Fox, *Report on the County of Lincolnshire*, p.84; Wilson Fox, *Report on the Wages and Earnings of Agricultural Labourers*, p.16; LAO Winn 3/5.
140. Anderson (1985), p.87. See also Bryant (1971), pp.133, 139; Mills (1984); Robin (1980), p.189. It is unclear whether intra-rural movement increased in the latter half of the nineteenth century or whether it fell as more and more migration was directed townwards. Dennis Mills of the Open University is currently exploring this topic as part of a wider study of rural mobility. There is limited evidence to suggest that village inhabitants possessed an increasingly catholic assortment of birthplaces over the period 1851-1871/81. Barnett by le Wold W.E.A. (1984), p.100; Dennis Mills, personal communication; Mumby (1980), p.40. Work on Sweden has found no lengthening of migration fields in the nineteenth century. Erikson and Rogers (1978), pp.185-97; Hagerstrand (1957).
141. G.J. Fuller (1957), p.10.
142. LAO Winn 5/3.
143. Constant (1948); Peel (1942); Perry (1969).
144. Clark (1979); Mageean and Pryce (1982), pp.50-68; Souden (1981).
145. Devine (1983); Friedlander (1983).
146. De Jong and Fawcett (1981), p.16.

Notes to Chapter 5

1. For the history of the Scunthorpe district see M.E. Armstrong (1981a), Daff (1973) and Wardley (1983), ch.2. Much of the first section of this chapter is based upon these works.
2. Crosby, the fifth township to form the town of Scunthorpe, is not examined here. It played little part in the industrial development of the area until after the turn of the century.
3. Ambler (1981).
4. Walshaw (1932-4), p.32. For a detailed account of the establishment of the iron industry in the area see Daff (1973), Daff (1981) and Wardley, (1983), ch.2.
5. Kendall (1938), p.274.
6. Walshaw (1932-4), pp.59-60; Daff (1981); *The Mining and Smelting Magazine*, 5 (January - June 1864), pp.170-1.
7. Ambler (1980), pp.3-4.
8. Pocock (1963), p.128; Daff (1981); Wright (1982), pp.161-4.
9. *The Mining Journal*, 15 January 1870, p.46, also quoted in Ambler (1980), p.11.
10. Wardley (1983), p.71. Not all the firms were successful. In 1883 the Lincolnshire Iron Smelting Company ran into financial difficulties and its furnaces were taken over by the Redbourne Hill Company, the combined works becoming the North Lindsey Works. In 1887 the Dawes brothers went bankrupt and a Leeds solicitor took possession of their Trent Works. Daff (1981), pp.37-8; Wright (1982), pp.173-4.
11. Henthorn (1975); Henthorn (1981). This railway was absorbed by the Manchester, Sheffield and Lincoln Railway in 1882.
12. *The Iron and Coal Trades Review*, 17 March 1876, p.306.
13. *The Iron and Coal Trades Review*, 15 July 1881, p.83.
14. Daff (1981), p.34; Pocock (1964), p.107; Wardley (1983), p.169.
15. *The Iron and Coal Trades Review*, 18 November 1881, p.645; Daff (1981); Wardley (1983), p.65; Wright (1982), pp.164-5. Iron mining was also undertaken elsewhere in the county, on a smaller scale: Wardley (1983), pp.60-64.
16. Pocock (1981a), p.46; Walshaw (1932-4), pp.59-60.
17. *The Hull and Lincolnshire Times*, 2 June 1888.
18. Anon, *Lindsey Notes* (1890).
19. *The Mining Journal*, 28 April 1866, p.267, also quoted in Ambler (1980),

p.9.

20. Pocock (1970) provides a detailed examination of this topic.
21. Pocock (1981b), p.57.
22. Ambler (1980), pp.6,12.
23. Pocock (1981b), p.57.
24. *The Hull and Lincolnshire Times*, 21 June 1888, quoted in Pocock (1981b), pp.55-7. I have been unable to verify this quotation owing to Pocock's erroneous reference.
25. White (1882), p.307.
26. *The North Lindsey Star*, 18 April 1891.
27. Pocock (1970), p.59.
28. M.E. Armstrong (1981b)
29. Kelly (1896), p.454; *The North Lindsey Star* 18 April 1891.
30. Needless to say, the existing structure of local government could not contain such expansion. For an account of the contentious developments leading up to the amalgamation of the five townships into an Urban District in 1919, and the granting of Borough status in 1936, see Hartley (1981).
31. Bell (1907), pp.178-9.
32. *Census Reports*, 1851 and 1881.
33. These estimates are calculated from evidence in the following sources: Walshaw and Behrendt (1950), p.42; Beastall (1978), p.125. Wages in agriculture had recently fallen from a higher level with the failure of agricultural trade unionism in 1873. See also Dodd (1963), p.16.
34. Walshaw and Behrendt (1950), p.43.
35. Most of those designated 'engine driver' appear to have been either blast engine drivers or to have shunted the bogies containing raw materials around the iron works, rather than locomotive drivers on the Trent, Ancholme and Grimsby Railway. Such cases have accordingly been placed in the class 'furnace and other iron workers' in Appendix D.
36. Bremner (repr. 1969), p.34.
37. Dodd (1963), pp.18-21; *The North Lindsey Star*, 29 August 1891, 31 October 1891. Westwood made a clear distinction between the iron miners and the furnace workers in his paper on the local industry. Westwood (1918-20), pp.153-55.
38. Walshaw and Behrendt (1950), p.42.
39. *Lincolnshire Iron Masters' Association Minutes*, volume 1, 20 June 1893.

For industrial relations in the locality in this period see Wardley (1981) and Wardley (1983), ch.5.

40. Haines (1979).

41. This calculation has been confined to Scunthorpe, the largest of the four study townships. Of 42 household heads unequivocally identified as employed in the iron industry, 23 were located in the township a decade later: a persistence rate of 54.8%. This is on the high side: existing studies of persistence within a town or urban area in the later nineteenth century have found rates of between 30% and 60%. Lawton (1979), p.220; Dennis (1984), ch.8. Studies of North American towns in particular have found massive transiency: Griffen (1969), pp.56-7; Katz (1975), ch.3; Katz, Doucet and Stern (1982), ch.3; Knights (1969), pp.261-4; Thernstrom (1964), pp.84-90; Thernstrom (1973), pp.15-21.

42. Burn (1940), pp.18-83.

43. Annual Report of the Medical Officer of Health, Brigg Union, 1877.

44. A number of additional limitations beset the method. Most important, perhaps, is the malevolent influence of time itself. The earlier a family moved in, the longer the period until the 1881 census during which it was at risk of moving out again. (This makes the relative discrepancy in the two peaks of net in-migration in the 1870s even more striking). Another problem is that older children will probably have left home. This is the reason for excluding those cases with no co-resident child under 20. Furthermore, there is no way of capturing the effect of return migration, nor of wives simply returning to their mother's home for their confinement. Lastly, the accuracy of the estimated year of arrival varies widely from case to case. This is because the estimate is based upon the mid-point between two children's ages. The smaller the age gap between the two children the more accurate the estimate is likely to be. One positive attribute of the method is that it excludes from the analysis all those who in-migrated as children.

45. Those fathers who had moved from one study township to another are excluded from the analysis.

46. The graphs are distorted to a slight extent by inaccuracy in the age-recording of young children. More children aged two were enumerated than were children aged one. The structure of the population under five was as follows:-

	Males %	Females %
0-	11.3	11.1
1-	9.2	9.3
2-	11.9	9.7
3-	9.6	8.6
4-	8.8	10.3
	<u>50.9</u>	<u>49.1</u>

(N = 1018)

The estimated year of arrival is calculated as follows:

1. Calculate the mean age of the two children. To all ages given in whole years, first add 0.5 (that is, assume these recorded ages are mid-year estimates).
2. Subtract this figure from 1881.25, that is, from the first quarter of 1881, when the census was taken.
3. Truncate the result to obtain approximate year of father's arrival.

47. For example, the log book of Ashby Junior School, 28 August 1876 records that 'the population of Ashby has been growing very rapidly of late, through the development of iron mines in the neighbourhood. Ignorant newcomers constantly flock to the school and seldom remain long in it, their parents either leaving the village, or transferring them to dame schools'. (Reproduced in M.E. Armstrong (1981b), p.91.)
48. Burn (1940), pp.18-83; *The Mining Journal*, 19 July 1873; *The Iron and Coal Trades Review*, 18 February 1876, p.189; 10 October 1879, p.363; 12 December 1879, p.584; 9 January 1880, p.42; 28 May 1880; 16 July 1880 p.74 ; 15 July 1881, p.83.
49. That is, because a mean of two ages is used.
50. Those bearing the relationship of 'child' to another member of their household are excluded, with the exception of household heads or their wives. The purpose is to exclude those who did not migrate 'independently'. Henceforth, the term 'children excluded' will be used to denote such a qualification.
51. The migration field of the Scunthorpe district bore more resemblance to that of a large industrial town than it did to any isolated rural

community. Compare the maps given here with that showing the migration field of Preston in 1851 in Anderson (1971), p.35.

52. Turton (1976), p.63.

Notes to Chapter 6

1. White and Woods (1980), p.17.
2. Ibid, pp.15-17.
3. This orthodox view is most recently outlined in Dennis (1984), pp.33-4. However, Dennis does point out that large cities often attracted the unskilled from quite long distances. See also Lawton (1979), p.213.
4. Royle (1978), p.37.
5. Turton (1976).
6. Ibid, p.63.
7. J.T. Jackson (1982).
8. Cromar (1980).
9. Ibid, p.147.
10. Cliff interview transcript, 1941; Dodd (1963), p.18; Dove (1885), p.414; Goldsmith (1981), p.133; Kendall (1938), p.275; Pocock (1963), p.133; Walshaw (1932-4), pp.34-5; Wright (1982), pp.165, 173-4.
11. Bell (1907), p.34; Gale (1971), pp.43, 82; Gintz (1954), pp.113-20; Goldsmith (1981), pp.133-4; Royal Commission on Labour, PP 1892 XXXVI Part 1, p.257 (evidence of W. Snow).
12. Porter refers to the furnace keeper as part of 'the real aristocracy of the iron trade's workforce'. Porter (1982), p.255.
13. Cliff interview transcript, 1941; Gale (1967), p.23; Gintz (1954), pp.120-30; Walshaw and Behrendt (1950), pp.39-40; Royal Commission on Labour, PP 1892 XXXVI Part 1, p.257 (evidence of W. Snow).
14. Royal Commission on Labour, PP 1892 XXXVI Part 1, p.257 (evidence of W. Snow).
15. Carr and Taplin (1962), p.90; Daff (1968), pp.693-4; Daff (1973), p.119; Walshaw and Behrendt (1950), pp.38-9.
16. '... there is always a class of men that are needed in a furnace yard to do general work, clean up the messes that have occurred from time to time, and also to make preparations that are needful with regard to the work.' Royal Commission on Labour, PP 1892 XXXVI Part 1, p.272 (evidence of T. Carlton). See also Walshaw and Behrendt (1950), pp.38-9.
17. Dove (1876), p.319.
18. Westwood (1918-20), p.155.
19. Bell (1907), p.2. Lady Bell restricted her study to those who laboured in and around the furnaces. She did not examine the lives of the

Cleveland ore miners.

20. I would therefore dissent from the view of Peter Wardley, who maintains 'There were no barriers in terms of skill between the quarry workers and the men who had recently joined a blast furnace crew'. Wardley (1983), p.198 (and see also p.207). However, if Wardley's view is the more accurate, then the findings presented later in this chapter become all the more striking.
21. More (1980), p.121.
22. Ibid, pp.119-21; Wardley (1983), pp.201-3.
23. I feel Wardley is wrong to see these differences as minimal. Wardley (1983), p.207.
24. In contrast to underground ore mining, which was extremely dangerous. Harrison (1979), pp.245-6.
25. Bell (1907), p.34.
26. Most of the furnaces in the district were open-topped at this time.
27. Goldsmith (1981), p.134.
28. Bell (1907), p.36.
29. Bremner (1869), p.39.
30. Evidence from other regions - albeit for underground miners - supports this view of less arduous hours. Harrison (1979), p.244; Royal Commission on Labour, PP 1892 XXXIV, p.37 (evidence of J. Toyn).
31. Walshaw (1932-4), p.57.
32. Owens (1953), p.23; Royal Commission on Labour, PP 1892 XXXVI Part 1, p.261 (evidence of W. Snow).
33. Cliff interview transcript, 1941; Dodd (1963), p.28; Gintz (1954), pp.193-4; Goldsmith (1981), p.131; Lincolnshire Iron Masters' Association Minutes, volume 1, 29 June 1892; Royal Commission on Labour, PP 1892 XXXVI Part 1, pp.256-7, 261, 266, 269.
34. Royal Commission on Labour, PP 1892 XXXVI Part 1, p.287 (evidence of P. Walls).
35. The North Lindsey Star, 6 June 1891.
36. Royal Commission on Labour, PP 1892 XXXVI Part 1, p.257.

37. The figures are as follows:

<u>Residence</u>	<u>Number of households</u>	
	(a)	(b)
No manual Iron employees	441	454
One Iron WORKER only	205	217
One Iron MINER only	249	259
>1 Iron WORKER, no MINER	76	59
>1 Iron MINER, no WORKER	43	34
>=1 WORKER, >=1 MINER	33	24
Total	1047	1047

(a) All male inhabitants included.

(b) Sons employed in iron excluded.

Source: C.E.Bs.

Note: This analysis is necessarily restricted to those positively identified as manual iron employees.

38. Thus 32.0% of 'lower' iron workers were unmarried, while the proportion among 'higher' iron workers and iron miners was 24.7% and 20.1% respectively.

39. Redford (1926), pp.35, 160. The same phenomenon seems to have occurred in the Cleveland iron district. However, this area differed from north Lincolnshire in that a high percentage of its less skilled furnacemen (but not iron miners) were Irish. Harrison (1979), pp.238-40.

40. A 'rural' community is defined as follows:

- Population less than 2500
- Absence of any urban nucleus as confirmed by map evidence
- in ambiguous cases, reference to the settlement as a 'village' or 'hamlet' in J. Bartholomew, *Gazeteer of the British Isles* (Edinburgh, 1877).

41. Walshaw (1932-4), p.35. It was reported that 'farm labourers make the best of miners' in the Cleveland underground ore mines. Royal Commission on Labour PP 1892 XXXIV, p.66 (evidence of J. Strong). See also Harrison (1979), p.239.

42. Ambler (1980), p.25. See also Samuel (1977), pp.4-5. Wardley sees transfers from the land to the furnaces as also 'occupationally easy'. Wardley (1983), p.207. The evidence presented here surely suggests otherwise.

43. Bell (1907), pp.43-4.
44. Russell (1956), pp.47-8; Dodd (1963), pp.27-9. For an account of industrial relations in the district at this time see Wardley (1981) and Wardley (1983), ch.5.
45. With the exception that those from locations with a population of over 10,000 were not searched for - see Chapter 2.
46. Only those males economically active in the 1871 census are included in this analysis. Six out of the 13 traced 'higher' iron workers recorded agricultural occupations in 1871, but these are but a small number of local cases and thus hardly typical. The high proportion of 'lower' iron men who previously worked on the land is also a reflection of propinquity. Those from farther afield were, it seems, more likely to have worked in non-agrarian occupations (mostly iron) than were iron miners from comparable distances. Compare for example the cases from Staffordshire, Worcestershire and Essex in the next section of this chapter.
47. A similar interpretation is implicit in Marshall and Walton's discussion of migration into iron occupations among agricultural labourers in the north-west. Marshall and Walton (1981), pp.70, 84.
48. Ambler (1980), p.4; Dove (1876), p.323; Pocock (1981a), p.52.
49. Wardley (1983), p.91; Walshaw and Behrendt (1950), p.152.
50. Diary of John Green, 20 December 1869.
51. A. Birch (1967), p.246.
52. Redford (1926), p.162.
53. Gwynne and Sill (1976); Harrison (1979), p.239; J.T. Jackson (1982), pp.114-5; Redford (1926), pp.35, 41-3, 51-3. 158-60.
54. The North Lindsey Star, 11 April 1891, 18 April 1891.
55. Ibid, 25 April 1891.
56. A very similar picture has been found in the case of Welsh iron workers who migrated to Middlesbrough in the 1850s. Gwynne and Sill (1976), pp.74-7.
57. A. Birch (1967), chs. 7 and 8; Le Guillou (1972).
58. A. Birch (1967), pp.134-8, 331-4; Gale (1977), pp.27-8.
59. A similar picture is found in the Cleveland district at this time. Iron miners came from 'practically every rural county in England', including a great many from south Lincolnshire: Harrison (1979), pp.239-40; Harrison (1978), p.26.
60. Westwood (1918-20), p.155. See also Kendall (1938), p.275.
61. 'Many of the houses at Frodingham are the property of the masters, and

workmen must leave the houses when they leave the works'. **The Labourer**, 5 June 1875.

62. For industrial labour recruitment in this period see More (1980), pp.65-7.

63. Grigg (1977), p.49.

64. Diary of John Green, 20-22 August 1867.

65. Anderson (1974), p.24.

Notes to Chapter 7

1. Everitt (1974).
2. Olney (1979), p.28.
3. Couth (1981), pp.155, 163, 175.
4. Anon (1836), p.100.
5. White (1882), p.335; Wright (1982), p.229. It is this unit, the Municipal Borough of 1879, which has been sampled here in the 1881 census, being the unit most coextensive with the built-up urban area. See Chapter 2.
6. The malting trade was also cited as a cause of population growth in Manthorpe cum Little Gonerby and Spittlegate townships. *Census Report, 1871, PP 1872 LXVI Part 2, p.352.*
7. Dickenson (1969), pp.47-8 and Dickenson (1971) give an account of the impact of the opening of the G.N.R. on the population of south Lincolnshire.
8. Honeybone (1980), pp.58-9.
9. Wright (1982), pp.137-54.
10. *G.N.R. Official Guide, 1857*, quoted in Pointer (1976), p.13.
11. Bowen and Willard (1949), p.38; Dickenson (1969), pp.80-93; White (1882), p.335; Wright (1982), pp.138-57. Important engineering firms also grew up in Lincoln and Gainsborough. See Wright (1982), ch.6.
12. White (1882), p.335.
13. *The Grantham Journal*, 24 January 1880.
14. C.B. Doran, *Manufacturers and the Smoke Question: report of the prosecution of the Spittlegate Iron works, July 1870* (Grantham, 1870).
15. Dickenson (1969), pp.99-102; Honeybone (1980), p.113; White (1882), pp.345, 347.
16. Honeybone (1980), pp.114-5.
17. Depression led to considerable industrial unrest at Hornsby and Sons in the 1880s. *Royal Commission on Labour. Answers to the Schedules of Questions (Group A)*, PP 1892 XXXVI Part 3, p.284; Manuscript letter in Haynes (1934), volume 2, p.14.
18. As in the case of the Scunthorpe district census of 1881, many of the Grantham labourers and craftsmen could not be unequivocally allocated to the major industry, although it seems probable that a great many of them were so employed.
19. *Royal Commission on Labour. Answers to the Schedules of Questions,*

p.241.

20. Dawson (1962), pp.85-6. Royal Commission on Labour. Answers to the Schedules of Questions, p.241.
21. Royal Commission on Labour. Answers to the Schedules of Questions, p.186.
22. The structure of employment within the major industry was delineated on the same basis as in the Scunthorpe case study, using the Registrar General's Classification of Occupations 1951 to resolve ambiguous cases. See Chapter 5.
23. The Hornsby engineering works were often referred to as the 'iron works' by contemporaries on account of the extensive foundry operations there undertaken. This was a stage beyond the basic, primary production of crude pig undertaken at Scunthorpe.
24. The high proportion of non-natives among the population of Harrowby reflects its role as the location of the South Lincolnshire Militia barracks.
25. The 1851 figure is given in Mills (1984), p.iii.
26. Mortality rates were higher among males than females, though the difference is too small to account for much of the female excess.
27. See Chapter 5, note 50.
28. A crude indication of this is provided by comparing the population density of the Registration Districts within which the two study areas were situated:

Persons per acre, 1871:

Grantham Registration District	0.29
Glanford Brigg Registration District	0.22

Within which:

Grantham Municipal Borough	3.04
Four Scunthorpe district townships	0.91

Which leaves a residual:

Grantham Registration District	0.14
Glanford Brigg Registration District	0.19

So ten years before the 1881 census the area around Scunthorpe appears to have been slightly more densely populated than the area around Grantham. Census Report, 1871.

29. Sample data for a selection of urban areas from the 1851 census provides a comparable picture:

<u>Females aged 15-24</u>	<u>Birthplace (cumulative %)</u>			(N)
	Native	1-49km	Other Britain	
Servants	35.2	78.3	100.0	(281)
Semi-skilled	69.9	92.5	100.0	(133)

Source: Re-worked data from Anderson (1985), Table 4.

30. This is usually seen as evidence of 'assimilation' problems. In his study of Rochdale in this period, for example, Higgs found that native women made up the bulk of the better-paid factory work-force. Higgs (1979), ch.7. This topic is explored in detail in Chapter 9 below.
31. See Chapter 6 note 40 for the definition of a rural community used here. Urban places are all those not classified as rural.
32. Anderson (1974), p.142, Table 6.
33. For one thing, the town possessed older and more comprehensive rail links with neighbouring towns. Train excursions were frequently run to places like Lincoln, Cambridge and Newmarket; the annual fair in April 1881 attracted many from 'Nottingham and other places, by means of excursion trains'. *The Grantham Journal*, 2 April 1881, 9 April 1881, 7 May 1881, 18 June 1881.
34. Many of the labourers in the Hornsby works appear to have moved in off the land. Thus a management letter of 1885 proposing a one shilling cut in the wages of labourers specifically drew attention to the lesser rates of pay prevailing on local farms (13s. 6d. compared with 15-18 shillings). Haynes (1984), volume 2, p.14.
35. Dawson (1962), pp.85-6.

Notes to Chapter 8

1. Grigg (1977), pp.49-50. This has been clearly shown from the superior Swedish records. See Erikson and Rogers (1978), pp.199-202.; Kronberg and Nilsson (1975), p. 182.
2. Anderson (1971); B. Collins (1979); B. Collins (1981). For a review of much of the recent literature see Darroch (1981).
3. Ohngren (1974), p.376.
4. Akerman (1975). A similar conclusion was reached by Samson in his study of a region of the Netherlands in the later nineteenth century. Samson (1973), p.101.
5. Anderson (1971); B. Collins (1979); B. Collins (1981).
6. For example see J.T. Jackson (1982).
7. A similar phenomenon has been found in Preston in the 1851 census. Anderson (1971), pp.40-1, Table 7.
8. This and subsequent tables using the 'single' and 'family' migrant classification have been constructed in the same manner as was Table 8.4. In each case, the raw number of 'single' migrants within the particular sub-population are 'corrected' using the ratios obtained from the total native population. Using the terminology of Table 8.3, columns (a) and (b) remain the same in every case (differing only by sex and location) but the figures in columns (c), (e) and (g) are replaced by those pertaining to the particular population sub-group being examined. The calculation then proceeds as explained in the example given earlier.
9. Wright (1982), ch.10.
10. This crude distance distinction is admittedly arbitrary but is a useful means of organising this description of possible forces at work.
11. J.T. Jackson (1982), p.131.
12. A. Birch (1967), pp.133-4, 155-7.
13. Bell (1907), pp.178-9.
14. Anderson (1976), pp.62-5 shows this using ecological data; Bell (1907), pp.178-9.
15. Bell (1907), p.180.
16. The high incidence of lodging among married couples in the Scunthorpe district suggests a spouse was more valued than a house. See Chapter 9.
17. Redford (1926), pp.35, 160.

Notes to Chapter 9

1. Checkland (1964), pp.263-4.
2. Baines (1981), p.158.
3. Hopkinson (1981), p.215.
4. Hopkinson (1981), pp.165-6. A similar phenomenon has been noted in Cardiff between 1851 and 1871. Williams (1980), pp.7-9.
5. Anderson (1971), pp.153, 154.
6. Ibid, p.154.
7. Anderson (1985), p.80.
8. Ibid.
9. Banks (1973), p.118.
10. Pooley (1983), p.302.
11. Pooley (1983), pp.296-303.
12. B. Collins (1979); B. Collins (1981).
13. Anderson (1985), pp.88-89.
14. Finnegan (1982); Lees (1979); O'Tuathaigh (1981).
15. Given the life-cycle pattern of employment in many occupations, as illustrated in Chapter 6, it is impossible to delineate occupational changes which were solely the result of increasing acclimatisation to particular work scenes in a new environment.
16. B. Collins (1979), ch.8; Dennis (1984), pp.35-41; Lees (1979), ch.3; O'Tuathaigh (1981); Pooley (1977); Williams (1980), pp.7-9.
17. Pooley (1977), pp.372-8.
18. Tansey (1973).
19. Grundy (1982), ch.7.
20. Wheatley (1983), pp.183-4.
21. Dennis (1984), pp.222-3; Hopkinson (1981), p.165.
22. Anderson (1971), p.21.
23. Carter and Wheatley (1980); Carter and Wheatley (1982); Dennis (1984), ch.7; Pooley (1977); Shaw (1977); Ward (1980); Wheatley (1983), pp.402-16.
24. Carter and Wheatley (1980), p.60, Figure 2; Wheatley (1983), pp.404-5.

25. Dennis (1984), pp.205-7.
26. Carter and Wheatley (1982); Dennis (1984), pp.207-11; Pooley (1977); Pooley (1984); Shaw (1977); Wheatley (1983).
27. Dennis (1984), p.214.
28. Figures collated in Dennis (1984), p.224, Table 7.3.
29. Cambridgeshire (12 heads), Derbyshire (14 heads), Huntingdonshire (18), Lancashire (10), Leicestershire (77), Norfolk (19), Northamptonshire (19), Nottinghamshire (66), Rutland (14), Yorkshire (16). Only those counties providing 10 or more heads were used as the chances of clustering among heads with few fellows from the same county would be slight.
30. See Hopkinson (1981), p.165 for another example of the tendency for migrants generally to be more dominant in certain parts of a town. In the Scunthorpe district, however, the majority of household heads were migrants and it is the native heads whose spatial distribution varies most from that of the total population of heads.
31. Shared households were excluded from this analysis as it was impossible to differentiate genuine neighbours from the co-head in these cases. Shared households were included as neighbours.
32. For each household head in the database a separate random number was generated using a procedure within the SIR commands. This random number was then used to identify another head living within the same settlement.
33. The shorter of these distances was used rather than the average of the two. Assuming that migrant groups did tend to cluster together, there is no reason to expect them to have had any really strong need (or to have been able to obtain) a house with a familiar neighbour on both sides. The important point, surely, was simply to live near to a familiar person. Heads who did not possess two apparently neighbouring heads, each with an identifiable birthplace, were nevertheless excluded from the analysis to avoid bias. All heads without identifiable birthplaces themselves were also excluded.
34. $t = 7.79$, $p < 0.0005$ by a one-tailed test. The medians are 20.6 and 38.9 kilometres respectively.
35. Dennis (1984), ch.7; Pooley (1984).
36. The 1851 data has kindly been made available to me by Michael Anderson. For further details of the National Sample of the 1851 census see Anderson, Collins and Stott (1977).
37. See Chapter 7.
38. Anderson (1985), pp.85-6.
39. Anderson (1985), p.86.
40. Those occupational groups shown in Table 7.8 were chosen for containing at least 30 cases before disaggregation by migrant category.

41. Anderson (1985), pp.85-6.
42. A direct comparison between the two locations cannot be made using this Table because of the different age structure of the two locations.
43. Anderson found that 12% of his sample of Preston in 1851 lived in lodgings while only 3% of his rural sample did so. Anderson (1971), pp.46, 84.
44. Indeed, the figures in some areas are so high as to suggest movement both into and out of lodgings even among married couples. Anderson (1971), p.48.
45. N = 216 and 161 respectively. This difference is statistically significant: $\chi^2 = 6.51$, 1 degree of freedom, $p < 0.02$. Larger groups of lodgers were much more rare, and the difference between the two locations less evident. For example, the proportion of all private households containing lodgers with more than three lodgers was 8.3% in the Scunthorpe district and 5.0% in Grantham (N = 216 and 161 respectively again). This difference is not statistically significant: $\chi^2 = 1.62$, 1 degree of freedom.
46. N = 242 and 182 respectively. This difference is statistically significant at the 0.10 level: $\chi^2 = 3.53$, 1 degree of freedom.
47. Within the Scunthorpe district, only Scunthorpe township itself contained shared dwellings according to the enumerators' books.
48. Although one of these 'private' houses headed by a bricklayer contained 13 lodgers. Common lodging houses were identified by the occupational title(s) of the household head or head's spouse.
49. Wheatley (1983), pp.161-2.
50. Anderson (1971), p.102.
51. N = 139. This includes native heads.
52. N = 202. Neither of these differences between the two locations is statistically significant: for the 2 kilometre measure $\chi^2 = 0.51$, 1 degree of freedom; for the 10 kilometre measure $\chi^2 = 0.96$, 1 degree of freedom.
53. N = 151 and 222 respectively. The difference between the two locations using the 2 kilometre measure is not statistically significant: $\chi^2 = 0.22$, 1 degree of freedom. Using the 10 kilometre measure the difference is statistically significant at a low level: $\chi^2 = 2.13$, 1 degree of freedom, $p < 0.20$.
54. To control for this factor it would be necessary to calculate the percentage of each group of migrants who were living with people from the same origin, and weight this figure by the number of people from that origin actually 'available' in the community with whom they could live. To do this for every birthplace group would be laborious, and the results still imperfect as there would still be no means of weeding out those who moved with co-villagers from those who moved to join them.

55. $\chi^2 = 18.04$, 1 degree of freedom, $p < 0.001$. $N = 148$ and 991 respectively.
56. Anderson (1971), p.155.
57. The ratio of population to houses was 4.6 in the rest of the Grantham Registration Sub-District, 5.4 in England and Wales, 4.9 in Leicester and 4.8 in Nottingham.
58. LAO Grantham Borough Records: Minute Book of the Local Board, Spittlegate, Houghton and Walton, 6 February 1877; Honeybone (1980), p.88.
59. C.B. Doran, **Manufacturers and the Smoke Question: report of the prosecution of the Spittlegate Iron works, July 1870** (Grantham, 1870), p.11.
60. LAO Grantham Borough Records, manuscript Report of Dr. Ruslowe, c.1864.
61. Grantham Municipal Borough accounted for 79.0% of the Registration Sub-District. **Annual Report of the Registrar General, Number 44; Census Report, 1881.**
62. LAO Grantham Borough Records, manuscript Report of Dr. Ruslowe, c.1864. A similar appraisal of the town was made in an official report at about the same time. H.J. Hunter, **Inquiry on the State of the Dwellings of Rural Labourers. Seventh Report of the Medical Officer of the Privy Council, 1864, Appendix No.6, PP 1865 XXVI, p.225.**
63. Millhouse (1949), p.4.
64. **Annual Report of the Registrar General, Number 44.**
65. **Annual Report of the Medical Officer of Health, Brigg Union, 1877.**
66. **Annual Report of the Medical Officer of Health, Brigg Union, 1890.**
67. **Census Report, 1881.**
68. **Annual Report of the Medical Officer of Health, Brigg Union, 1877.**
69. Anderson (1971), pp.158-60; Grundy (1982), pp.316-26.
70. Diary of John Green, 1867-70.
71. $N = 1025$ and 1012 respectively.
72. There was no enumeration district in either the Grantham sample or the Scunthorpe district which contained no lodgers, only visitors. The description 'visitor' can therefore be taken as reasonably genuine and consistent throughout the data.
73. Family and other kin of visitors constituted 20.0% of all Grantham sample and 17.5% of all Scunthorpe district non-native visitors enumerated in private households.

74. It must be noted, however, that people born further away are more likely to have lived somewhere nearer since birth, given the tendency for step migration to increase in incidence with distance moved.
75. The Grantham Journal, 2 April 1881, 9 April 1881.
76. The Grantham Journal, 7 May 1881; A. Wilson Fox, Report on the Wages and Earnings of Agricultural Labourers in Great Britain, PP 1900 LXXXII, p.17.
77. The Grantham Journal, 7 May 1881, 18 June 1881.
78. N = 1012 and 1180 respectively. The definition of 'urban' and 'rural' birthplace is explained in Chapter 6, footnote 40. All cases with unidentifiable birthplaces are excluded from the analysis.
79. N = 1383 and 1194 respectively.

Notes to Chapter 10

1. See also B. Collins (1979), B. Collins (1981), Grundy (1982), Lees (1979) and Pooley (1983) for attempts to do this.
2. Redford (1926), pp.35, 160.
3. Anderson (1971); B. Collins (1979); B. Collins (1981); Darroch (1981).
4. Devine's study of Highland migration to lowland Scotland is an excellent example of this interpretation. Devine (1983).
5. The most famous such attempt is, of course, that of E.G. Ravenstein in the later nineteenth century. Grigg (1977).
6. This view was expressed by participants at the session on migration at the Annual Conference of the British Urban History Group in 1980. Daunton (1980).
7. For examples of these concepts see Hagerstrand (1957), Jansen (1969), p.61, Lee (1969) and White and Woods (1980), pp.34-41.
8. This view accords with recent theoretical reassessments - see De Jong and Gardner (1981).
9. See the contributions to De Jong and Gardner (1981) for the role of micro-level analysis in the study of migration. The important thing is to combine both levels of analysis. Individual level information must be examined in the context of wider, community-level influences; macro-level factors must be viewed from the perspective of the individuals concerned. Just as a concentration upon aggregates can mislead, so, too, can an emphasis upon individual behaviour without reference to context. Gardner (1981), p.62. For studies of Victorian migration which do seem to attempt to link the two levels see Anderson (1971), B. Collins (1979), B. Collins (1981), Pooley (1977) and Pooley (1983). Lastly, of course, the two levels are not a dichotomy but should, rather, be seen as the extremes of a continuum. Intermediate stages have been termed 'meso-level'. Gardner (1981), p.60; Lawton (1979).
10. Greenwood and Thomas (1973); Hunt (1981), p.148; Lawton (1973), p.218; Lind (1969), pp.74-5; Vedder and Cooper (1974).
11. De Jong and Gardner (1981), p.5.
12. For the rationality of migrants see Lee (1969), p.288. It must be said, however, that most theoretical formulations of the migration process have had to assume rationality on the part of the actors involved. See, for example, De Jong and Fawcett (1981) and Gardner (1981), p.62.
13. Haberkorn (1981), p.252.
14. Lee (1969), p.287.
15. De Jong and Fawcett (1981); Du Toit (1975); Haberkorn (1981), especially pp.253-7; Taylor (1969), pp.120-31; White and Woods (1980), p.11.

16. Taylor's study of migration among Durham miners in the 1960s is a good example of the use of this method: Taylor (1969). However, problems still remain in interpreting stated motives: respondents often state either vague reasons or tend to post facto rationalise their behaviour in accordance with prevailing normative values. Jansen (1969), p.65; Taylor (1969), p.99.
17. The evidence presented in Chapter 4 illustrated this weakness.
18. Taylor (1969), p.107.
19. See, for example, Jackson's study of the St. Helens' Glassmakers. J.T. Jackson (1982). A good source for such a study is the National Sample of the 1851 census compiled at the University of Edinburgh and available at the ESRC Data Archive, University of Essex.
20. See Johnson (1971) on the mover/stayer dichotomy.
21. The 1891 census books are available in Scotland. Such a project could not be undertaken within a three-year solo research project.
22. On the nature of 'cross-sectional' versus 'longitudinal' studies see White and Woods (1980), pp.36-7.
23. Some studies of nineteenth century Britain have attempted such analyses. Friedlander's (1983) recent study of ecological Registration District data explores the relationship between migration and fertility, among other things. Brayshay (1980) linked emigration among Cornish miners to changes in household structure in the communities they left behind. Both Anderson (1971) and B. Collins (1979, 1981) relate migration to various aspects of family structure and the workings of the family economy.
24. Erikson and Rogers (1978), pp.48-51, 181-3; Kalvemmark (1979); Hagerstrand (1957).
25. For a review of such exercises see Dennis (1984), ch.8. Two examples are Dennis (1977) and Pooley (1979).
26. For the problems involved in record linkage using historical materials see Wrigley (1973), pp.1-16, and also Anderson (1972a), pp.71-4 and Morris (1976).
27. I understand that Colin Pooley of the University of Lancaster is undertaking such a study. Successive censuses are being used to explore Welsh migration to English urban areas.
28. See the notes to Table 4.6 for a discussion of possible sources of bias in such material.
29. Society for Lincolnshire History and Archaeology, Family History Sub-Committee, Birth Briefs, volume 1 (1982), and volume 2 (1984).

Notes to Appendix A

1. Baines (1972), p.321.

Notes to Appendix C

1. Greenwood and Thomas (1973); Vedder and Cooper (1974). See also Friedlander (1983) and for an exercise using the published 1897 Russian census, B. Anderson (1980).
2. Greenwood and Thomas (1973), p.94 and passim.
3. Vedder and Cooper (1974).
4. See note 65 to Chapter 4 for an explanation of how landownership was measured.
5. See Nie et al (1970), p.345.
6. On the non-linearity of the migration distance variable see Hagerstrand (1957), pp.112-32 and White and Woods (1980), pp.29-30.
7. Blalock (1972), pp.450-3.

BOOKS, ARTICLES AND THESES

(Place of publication London unless stated otherwise)

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